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**January 2003**

# **LIST OF MATERIALS**

## **Acceptable for Use on**

### **Telecommunications**

#### **Systems of RUS**

##### **Borrowers**



## PREFACE

This List of Materials (Telecommunications) supersedes all preceding issues including supplements of RUS Informational Publication 344-2. It reflects all actions of the Technical Standards Committees "A" and "B" (Telecommunications) through January 31, 2003, and includes changes in listings due to additions, deletions, and corrections made through Meeting No. 754 of Technical Standards Committee "A" (Telecommunications). Supplements reflecting changes in the List of Materials (Telecommunications) will be issued periodically and should be inserted to keep your copy up-to-date.

The small letters used to designate many construction items listed herein correspond to the letters used on construction drawings to indicate individual items of material; however, many equipment items have been assigned letter combinations only as a means of identification within the List of Materials (Telecommunications).

The acceptance of an additional item or the deletion of an existing item is a function of the RUS Administrator and Technical Standards Committees "A" and "B" (Telecommunications). Anyone desiring to have a new item placed on the List of Materials (Telecommunications), or believing an existing item should be removed from the List of Materials (Telecommunications), is invited to submit the matter to Technical Standards Committee "A" (Telecommunications). Any communication calling attention to an error, an obsolete item, etc., will also be appreciated. All communications should be addressed to the Chairman, Technical Standards Committee "A" (Telecommunications), Stop 1598, U.S. Department of Agriculture, Rural Utilities Service, 1400 Independence Avenue, SW., Washington, D.C. 20250-1598.

The inclusion of an item in the List of Materials (Telecommunications) does not indicate that that item's manufacturer or its principals have not been debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded pursuant to Executive Order 12549, Debarment or Suspension, or any rules or regulations issued thereunder, including 7 CFR Part 3017 ("Debarment Regulations"). Therefore, borrowers must comply with the requirements imposed by the Debarment Regulations before entering into any "covered transaction," as defined by 7 CFR Part 3017, involving any item on this List of Materials (Telecommunications).

**JANUARY 2003**

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\*Item no longer listed.

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\*Item no longer listed.

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### ORDERING INFORMATION

When ordering wire and cable having a standard RUS Unit Designation, this designation must be specified with the appropriate suffix or combinations of suffixes to indicate the type to be supplied. For example, filled cable with gopher-resistant shield containing copper and having compartmental cores (Screened) would be designated "BFCYH."

**sc - Buried Cable**

RUS Standard Designations "BFC", "CW", and "UF" (Filled) 7 CFR 1755.390  
 These manufacturers' cables shown by catalog designations comply with 7 CFR 1755.390

**RUS Standard Suffixes**

<b><u>Manufacturer</u></b>	<b><u>A(1)</u></b>	<b><u>C(1)</u></b>	<b><u>Y(1)</u></b>	<b><u>X(1)</u></b>	<b><u>H(1)</u></b>	<b><u>H1C(2)</u></b>	<b><u>P(1)</u></b>
Belden Wire & Cable	WG__(8)AR	WG__(8)CR	WG__(8)JR	WG__(8)WR	-	-	-
General Cable	PE-39-AL	PE-39-CU5	PE-39-CBS	PE-39-CAC	__(3)T1	__(3)T1C	-
Nacional De Conductores Eléctricos (Condumex)(5)	AM__(12)C	-	AM__(12)Q	AM__(12)D	-	-	-
Superior/Essex	SEALPIC <sup>R</sup> -F -	CUPIC <sup>R</sup> -F -	__(9)PIC <sup>R</sup> -F CUPIC <sup>R</sup> -F10	CASPIC <sup>R</sup> -F -	__(3)T1 __(3)T1	__(3)T1C __(3)T1C	__(4)P __(4)P

See page 1.1.2 for suffixes and notes.

**sc - Buried Cable**

RUS Standard Designations "BFC", "CW", and "UF" (Expanded Insulation - Filled) 7 CFR 1755.890  
 These manufacturers' cables shown by catalog designations comply with 7 CFR 1755.890

**RUS Standard Suffixes**

<b><u>Manufacturer</u></b>	<b><u>A(1)</u></b>	<b><u>C(1)</u></b>	<b><u>Y(1)</u></b>	<b><u>X(1)</u></b>	<b><u>H(1)</u></b>	<b><u>H1C(2)</u></b>	<b><u>P(1)</u></b>
Belden Wire & Cable <sup>(6)</sup>	WA__ <sup>(8)</sup> AR	WA__ <sup>(8)</sup> CR	WA__ <sup>(8)</sup> JR	WA__ <sup>(8)</sup> WR	KA__ <sup>(8)</sup> __ <sup>(10)</sup>	-	-
General Cable <sup>(6)</sup>	PE-89-AL	PE-89-CU5	PE-89-CBS	PE-89-CAC	__ <sup>(3)</sup> T1	__ <sup>(3)</sup> T1C	-
Nacional De Conductores Eléctricos (Condumex) <sup>(5)(6)</sup>	AN__ <sup>(12)</sup> D	-	AN__ <sup>(12)</sup> Q	AN__ <sup>(12)</sup> D	-	-	-
Superior/Essex <sup>(7)</sup>	SEALPIC <sup>R-F</sup> __ <sup>(11)</sup>	CUPIC <sup>R-F</sup> __ <sup>(11)</sup>	__ <sup>(9)</sup> PIC <sup>R-F</sup> __ <sup>(11)</sup> CUPIC <sup>R-F</sup> __ <sup>(11)</sup> 10	CASPIC <sup>R-F</sup> __ <sup>(11)</sup>	__ <sup>(3)</sup> T1 __ <sup>(3)</sup> T1	__ <sup>(3)</sup> T1C __ <sup>(7)</sup> T1C	__ <sup>(4)</sup> P __ <sup>(4)</sup> P

See page 1.1.2 for suffixes and notes.

**Suffixes**

Coated Aluminum Shield -----	A
5 Mil Copper Shield -----	C
Gopher-Resistant Shield Containing Copper -----	Y
Gopher-Resistant Shield/Armor Design -----	X
Screened Cable for T1 Carrier -----	H
Screened Cable for T1C Carrier -----	H1C
Preconnectorized Cable 100 pairs and greater -----	P

**Notes:**

- (1) Available in 19 through 26 AWG conductor sizes.
- (2) Available in 19 through 24 AWG conductor sizes.
- (3) Replace blank with manufacturer's catalog designation shown in the listing for suffixes A through X.
- (4) Replace blank with manufacturer's catalog designation shown in the listing for suffixes A through H1C.
- (5) Not accepted for 19 AWG conductor sizes.
- (6) Accepted for only foam/skin.
- (7) Accepted for foam and foam/skin.
- (8) Replace blank with either the number 9, 2, 4, or 6 to specify conductor AWG size.
- (9) Replace blank with either the letters B1 or GO to specify shield type.
- (10) Replace the blank with the letters AR, CR, JR, or WR to specify shield type.
- (11) Replace blank with either the letter F or the letters SF to specify conductor insulation type.
- (12) Replace blank with either the letter A, M, or T to specify conductor AWG size.

1.2  
1-03  
ct

**ct - Terminating Cable<sup>(1)</sup>**

These manufacturers' cables shown by X's comply with 7 CFR 1755.870.

**Manufacturer**

**RUS Standard Designation Suffixes**

	<b><u>A</u></b>	<b><u>P</u></b>
General Cable	X	-

**Suffixes:**

Coated Aluminum ----- A  
Preconnectorized Cable 100 pairs and greater ----- P

**Notes:** (1) To be supplied in only 22 and 24 AWG sizes.

**sa - Filled Buried Wires**

These manufacturers' filled buried wires shown by catalog designations comply with 7 CFR 1755.860.

<b><u>Manufacturer</u></b>	<b><u>Catalog Designation</u></b>			
	<b><u>Distribution</u></b> <sup>(1)</sup>		<b><u>SEB (service)</u></b> <sup>(2)</sup>	
RUS Standard Designations:	<u>N</u>	<u>Y</u>	<u>N</u>	<u>Y</u>
RUS Standard Suffixes:	<u>N</u>	<u>Y</u>	<u>N</u>	<u>Y</u>
Belden Wire & Cable	BFWN	BFWY	BFWN	BFWY
General Cable	BFWN	BFWY	BFWN	BFWY
Superior/Essex	BDW-B	BDW-G-CSC	BDW-B	BDW-G-CSC
	-	-	BDWB-DF <sup>(3)</sup>	BDWG-DF <sup>(3)</sup>

Suffixes:

Copper Alloy 220 (Bronze) Shield -----N  
Gopher-Resistant Shield -----Y

Notes:

- <sup>(1)</sup>Available in 22 and 24 AWG conductor sizes.
- <sup>(2)</sup>Available only in 22 AWG conductor size.
- <sup>(3)</sup>Wire uses a "Water Blocking Powder" in place of a "Gel Compound" as the filling compound surrounding the twisted pairs in the wire core.

1.4  
1-03  
nt

**nt - Aerial Service Wires**

**RUS Standard Designation "SEA"**

These manufacturers' wires shown by catalog designations comply with 7 CFR 1755.700 through 7 CFR 1755.704

**nt-a Copper Covered Steel Reinforced (CCSR) Aerial Service Wires**

<b><u>Manufacturer</u></b>	<b><u>Catalog Designations</u></b>					
	<b><u>Standard</u></b>		<b><u>Reduced</u></b>		<b><u>Super-Reduced</u></b>	
	<b><u>oval</u></b>	<b><u>dumbbell</u></b>	<b><u>oval</u></b>	<b><u>dumbbell</u></b>	<b><u>oval</u></b>	<b><u>dumbbell</u></b>
General Cable	-	ADR-182-PVC	-	-	-	-
Superior/Essex	ADP	ADP-D	-	-	ADP/SR	ADP/SR-D

**nt-b Nonmetallic Reinforced (NMR) Aerial Service Wires**

<b><u>Manufacturer</u></b>	<b><u>Catalog Designations</u></b>			
	<b><u>2-Pair</u></b>	<b><u>3-Pair</u></b>	<b><u>5-Pair</u></b>	<b><u>6-Pair</u></b>
Belden Wire & Cable	2X22 __ <sup>(1)</sup>	3X22 __ <sup>(1)</sup>	5X22 __ <sup>(1)</sup>	6X22 __ <sup>(1)</sup>
General Cable	2 TPR 22 AWG GSDW	-	-	6 TPR 22 AWG GSDW
Superior/Essex	2X22 ADP NMS	-	-	6X22 ADP NMS

<sup>(1)</sup>Replace blank with either "FRASW" or "FRASW Universal."

oc-Fiber Optic Cable

RUS Standard Designations "BFO", "CO", and "UO" (Filled) 7 CFR 1755.900  
 These manufacturers' cables shown by catalog designations comply with 7 CFR 1755.900

oc-a Unit Core or Central Core Tube Fiber Core Construction

RUS Standard Suffixes

Cable Construction

<u>Manufacturer</u>	<u>A(1)</u>	<u>B(1)</u>	<u>C</u>	<u>D</u>	<u>P(2)</u>	<u>Mode</u>	
						<u>s</u>	<u>m</u>
Alcatel	-	Unitube <sup>(5)</sup>	Unitube <sup>(5)</sup>	-	-	X	-
	-	-	MicroUnitube™ <sup>(6)</sup>	-	-	X	-
Corning Cable Systems <sup>(7)</sup>	-	SST-Ribbon	SST-Ribbon	-	(X)P-RUS	X	X
	-	SST	SST <sup>(12)</sup>	-	(X)P-RUS	X	X
OFS BrightWave <sup>(6)</sup>	-	<sup>(26)</sup> DNX	<sup>(26)</sup> D <sub>-</sub> <sup>(11)</sup> X	-	-	X	-
	-	<sub>713</sub> X	<sub>71</sub> SX	-	-	X	-
Pirelli <sup>(5)</sup>	-	-	-	CentraLink™ <sup>(4)</sup> <sup>(20)</sup>	-	X	-
Sumitomo Electric <sup>(7)</sup>	-	Litepipe™ ADS™	Litepipe™ Armorlux®	-	-	X	X
Superior Essex <sup>(5)</sup>	-	SLT <sup>(4)</sup>	-	SLT <sup>(4)</sup>	-	X	-
	-	SLT-D-R (Ribbon) <sup>(4)</sup>	-	SLT-D-R (Ribbon) <sup>(4)</sup>	-	X	-

See page 1.5.4 for suffixes and page 1.5.5 for notes.

oc-Fiber Optic Cable

RUS Standard Designations "BFO", "CO", and "UO" (Filled) 7 CFR 1755.900  
 These manufacturers' cables shown by catalog designations comply with 7 CFR 1755.900

oc-b Gel Filled Multiple Loose Tube Core Construction<sup>(3)</sup>

RUS Standard Suffixes

Cable Construction

<u>Manufacturer</u>	<u>E(1)</u>	<u>F(1)</u>	<u>G</u>	<u>H</u>	<u>P(2)</u>	<u>Mode</u>	
						<u>s</u>	<u>m</u>
Alcatel <sup>(5)</sup>	Loose Tube Filled	Loose Tube Filled	Loose Tube Filled	Loose Tube Filled	-	X	-
Belden Wire & Cable <sup>(6)</sup>	-	-	-	L__ <sup>(27)</sup> -0P	-	X	-
Draka Comteq <sup>(5)</sup>	-	R740L Series	-	R700L Series	-	X	-
OFS BrightWave <sup>(7)</sup>	Non-armored -	Non-armored -	Armored Light-Armored	Armored Light-Armored	(X)P-RUS (X)P-RUS	X X	X X
Pirelli <sup>(5)</sup>	-	Dielectric LT <sup>(20)</sup>	-	Armored LT <sup>(20)</sup>	-	X	-
Remeo Products <sup>(7)</sup>	- -	22 Series -	- -	23 Series <sup>(21)</sup> 28 Series <sup>(24)</sup>	- -	X X	X X
Sumitomo Electric <sup>(7)</sup>	SE-__ <sup>(25)</sup> HK	SE-__ <sup>(25)</sup> GK	SE-__ <sup>(25)</sup> H__ <sup>(19)</sup>	SE-__ <sup>(25)</sup> G__ <sup>(19)</sup>	-	X	X
Superior Essex <sup>(5)</sup>	MLT	MLT	MLT	MLT	-	X	-

See page 1.5.4 for suffixes and page 1.5.5 for notes.

oc-Fiber Optic Cable

RUS Standard Designations "CFO" (Filled) 7 CFR 1755.900  
 These manufacturers' cables shown by catalog designations comply with 7 CFR 1755.900

oc-c Self-Supporting Filled Fiber Optic Cables

RUS Standard Suffixes

Cable Construction

<u>Manufacturer</u>	<u>I</u>	<u>J</u>	<u>K</u>	<u>L</u>	<u>P(2)</u>	<u>Mode</u>	
						<u>s</u>	<u>m</u>
Alcatel	EZ PREP™ Figure 8 <sup>(5)</sup>	EZ Span™ <sup>(6)</sup>	EZ PREP™ Figure 8 <sup>(5)</sup>	-	-	X	-
	EZ PREP™ Figure 8 <sup>(6)</sup> (23)	-	EZ PREP™ Figure 8 <sup>(6)</sup> (23)	-	-	X	-
Alcoa Fujikura Ltd <sup>(7)</sup>	-	AFL Mini-Span Series <sup>(23)</sup>	-	-	-	X	X
Corning Cable Systems <sup>(7)</sup>	SST-Ribbon	SOLO-ADSS <sup>(20)</sup>	SST-Ribbon	-	(X)P-RUS	X	X
	ALTOS™ <sup>(23)</sup>	SOLO-ADSS <sup>(20)</sup> (23)	ALTOS™__ <sup>(22)</sup> (23)	-	(X)P-RUS	X	X
	ALTOSRD™ <sup>(23)</sup>	-	ALTOSRD™__ <sup>(22)</sup> (23)	-	(X)P-RUS	X	X
	SST	-	SST <sup>(12)</sup>	-	(X)P-RUS	X	X
General Cable <sup>(6)</sup>	4M_ <sup>(13)</sup> Y-DWB <sup>(23)</sup>	-	4H_ <sup>(13)</sup> N-DWB <sup>(23)</sup>	-	-	X	-
OFS BrightWave	Figure8 <sup>(7)</sup>	PowerGuide <sup>(7)</sup> (21)	Armored Figure8 <sup>(7)</sup>	-	(X)P-RUS	X	X
	-	PowerGuide <sup>(8)</sup> (20)(23)	-	-	(X)P-RUS	X	X
Pirelli <sup>(5)</sup>	-	AeroLink™ <sup>(23)</sup>	-	-	-	X	-
Remeo Products	88 Series <sup>(7)</sup>	88 Series <sup>(7)</sup>	83 Series <sup>(7)</sup>	83 Series <sup>(7)</sup>	-	X	X
	88W Series <sup>(6)</sup> (23)	88W Series <sup>(6)</sup> (23)	83W Series <sup>(6)</sup> (23)	83W Series <sup>(6)</sup> (23)	-	X	-
Sterlite Optical <sup>(5)</sup>	-	Aerial-Lite(ADSS) <sup>(23)</sup>	-	-	-	X	-
Superior Essex <sup>(5)</sup>	MLT-8	-	MLT-8	-	-	X	-
	MLT-D-8 <sup>(23)</sup>	-	MLT-D-8 <sup>(23)</sup>	-	-	X	-

See page 1.5.4 for suffixes and page 1.5.5 for notes.

oc-Fiber Optic Cable

RUS Standard Designations "BFO", "CO", and "UO" (Filled) 7 CFR 1755.900  
 These manufacturers' cables shown by catalog designations comply with 7 CFR 1755.900

oc-d Dry Filled Multiple Loose Tube Fiber Core Construction<sup>(3)(23)</sup>

RUS Standard Suffixes

Cable Construction

<u>Manufacturer</u>	<u>E(1)</u>	<u>F(1)</u>	<u>G</u>	<u>H</u>	<u>P(2)</u>	<u>Mode</u>	
						<u>s</u>	<u>m</u>
Alcatel <sup>(6)</sup>	EZ PREP™ Loose Tube	EZ PREP™ Loose Tube	EZ PREP™ Loose Tube	EZ PREP™ Loose Tube	-	X	-
	-	Non-Armored Flex Tube™ <sup>(29)</sup>	Armored Flex Tube™ <sup>(18)</sup>	-	-	X	-
Alcoa Fujikura Ltd. <sup>(7)</sup>	-	AFL Loose Tube Cable	-	AFL Armored Loose Tube Cable	-	X	X
Belden Wire & Cable <sup>(6)</sup>	-	-	-	__ <sup>(10)</sup> __ <sup>(27)</sup> FM	-	X	-
CommScope <sup>(6)</sup>	-	LN-XY-F12NS	-	L_ <sup>(30)</sup> -XY-F12NS	-	X	-
Corning Cable Systems <sup>(7)</sup>	ALTOS™	ALTOS™	ALTOS™__ <sup>(22)</sup>	ALTOS™__ <sup>(22)</sup>	(X)P-RUS	X	X
	ALTOSRD™	ALTOSRD™	ALTOSRD™__ <sup>(22)</sup>	ALTOSRD™__ <sup>(22)</sup>	(X)P-RUS	X	X
Draka Comteq <sup>(9)</sup>	-	DR740L Series	-	-	-	X	X
General Cable <sup>(6)</sup>	4_ <sup>(28)</sup> 2A-DWB	4_ <sup>(28)</sup> 1A-DWB	4_ <sup>(28)</sup> 2F-DWB	4_ <sup>(28)</sup> 1F-DWB	-	X	-
Hitachi Cable <sup>(5)</sup>	-	60090	-	60102 <sup>(24)</sup>	-	X	-
	-	-	-	60298 <sup>(21)</sup>	-	X	-
OFS BrightWave <sup>(8)</sup>	Non-armored	Non-armored	Armored	Armored	(X)P-RUS	X	X
	-	-	Light-Armored	Light-Armored	(X)P-RUS	X	X
Pirelli <sup>(5)</sup>	-	FlexLink™	-	FlexLink™ <sup>(20)</sup>	-	X	-

See page 1.5.4 for suffixes and continued oc-d dry-filled design listing; see page 1.5.5 for notes.

oc-Fiber Optic Cable

RUS Standard Designations "BFO", "CO", and "UO" (Filled) 7 CFR 1755.900  
 These manufacturers' cables shown by catalog designations comply with 7 CFR 1755.900

oc-d Dry Filled Multiple Loose Tube Fiber Core Construction<sup>(3)(23)</sup> (Cont'd)

RUS Standard Suffixes

Cable Construction

<u>Manufacturer</u>	<u>E(1)</u>	<u>F(1)</u>	<u>G</u>	<u>H</u>	<u>P(2)</u>	<u>Mode</u>	
						<u>s</u>	<u>m</u>
Remeo Products <sup>(6)</sup>	-	22W Series <sup>(24)</sup>	-	28 Series <sup>(24)</sup>	-	X	-
	-	25W Series <sup>(21)</sup>	-	23W Series <sup>(21)</sup>	-	X	-
Sterlite Optical <sup>(5)</sup>	Duct-Lite	Duct-Lite	Armor-Lite	Armor-Lite	-	X	-
Sumitomo Electric <sup>(7)</sup>	DriCore®	DriCore®	DriCore®	DriCore®	-	X	X
Superior Essex <sup>(5)</sup>	MLT-D	MLT-D	MLT-D	MLT-D	-	X	-

Suffixes:

- A - Nonarmored with Metallic Strength Members Embedded in Jacket
- B - Nonarmored with Dielectric Strength Members Embedded in Jacket
- C - Armored with Metallic Strength Members Embedded in Jacket
- D - Armored with Dielectric Strength Members Embedded in Jacket
- E - Nonarmored with Metallic Central Strength Member
- F - Nonarmored with Dielectric Central Strength Member
- G - Armored with Metallic Central Strength Member
- H - Armored with Dielectric Central Strength Member
- I - Nonarmored with Metallic Support Messenger
- J - Nonarmored with Dielectric Support Messenger
- K - Armored with Metallic Support Messenger
- L - Armored with Dielectric Support Messenger
- P - Preconnectorized Cable
- s - Single Mode
- m - Multimode

See page 1.5.5 for notes.

**Notes**

- (1) Aerial and duct use only.
- (2) Replace (X) with manufacturer's catalog designation shown in the listing for Cable Construction Types A through L.
- (3) May contain multiple fibers per tube.
- (4) Not embedded in jacket; surrounds central core tube.
- (5) Accepted only for dispersion-unshifted and dispersion-shifted single mode optical fibers.
- (6) Accepted only for dispersion-unshifted single mode optical fibers.
- (7) Accepted for dispersion-unshifted and dispersion-shifted single mode optical fibers. Also accepted for 50/125 and 62.5/125 micrometer multimode optical fibers.
- (8) Accepted for dispersion-unshifted and dispersion-shifted single mode optical fibers. Also accepted for 62.5/125-micromode optical fibers.
- (9) Accepted only for dispersion-unshifted single-mode and 50/125 and 62.5/125 micrometer multimode optical fibers.
- (10) Replace blank with either the letter A or L to indicate a double or single jacket.
- (11) Replace blank with either the letter H, M, R, or S.
- (12) Can only be supplied in sizes greater than 12 fibers.
- (13) Replace blank with the number 1 or 2.
- (18) Cable contains no metallic central strength member. Metallic strength members are embedded in the jacket.
- (19) Replace blank with either the letter A or E.
- (20) When ordering designate either single or double jacketed cable.
- (21) Double jacketed design.
- (22) Leave space blank or replace blank space with the word "Lite."
- (23) Cable uses a "Water Blocking Tape" in place of a "Gel Compound" as the filling compound surrounding the multiple loose tube buffers in the cable core.
- (24) Single jacketed design.
- (25) Replace blank with either the number 1, 2, 3, or 4.
- (26) Replace blank with either the number 4 or 7.
- (27) Replace blank with either a 6 or a T to indicate number of fibers per buffer tube. 6 = 6 and T = 12.
- (28) Replace blank with either the letter M or H.
- (29) Cable contains no dielectric central strength member. Dielectric strength members are embedded in the jacket.
- (30) Replace blank with the letter A to indicate single jacketed cable or the number 2 to indicate double jacketed cable.

	<u>Item Designation</u>	<u>Page</u>
Cases, splice.....	pl .....	2.1
" (Closure) repair kits.....	drk .....	2.10
Conduit, underground .....	hc .....	2.2
Enclosures, ready-access, cable .....	er .....	2.3
Fiber cable slack organizer .....	oco .....	2.11
Handholes .....	hh .....	2.4
Housings, buried plant .....	se .....	2.5
" central office splice for copper and fiber cables .....	sj .....	2.5.3
" " " " with patch panels for fiber optic cables.....	sj .....	2.5.4
Manholes, precast concrete.....	hm .....	2.7
Pedestal, inserts, restricted access .....	sk .....	2.5.5
Posts, mobile home.....	sd .....	2.8
Sealer, buried plant housing .....	ps .....	2.6
" duct .....	sp .....	2.6
Terminals, wire, pole-mounted.....	wt .....	2.9

**pl - Splice Closure**

<b><u>Manufacturer</u></b>	<b><u>Max. Cable Dia.</u><sup>(6)</sup></b>	<b><u>Straight</u></b>	<b><u>Branch</u></b>	<b><u>Encapsulant</u><sup>(2)</sup></b>
<b><u>a - Aerial Splice Closure for Copper Cables</u></b>				
<b><u>Free-Breathing</u></b>				
3M Company	1.60"	SLiC 2X19 FB	SLiC 2X19 FB	--
	1.60"	SLiC 2X29 FB	SLiC 2X29 FB	--
	2.60"	SLiC 3X33 FB	SLiC 3X33 FB	--
	3.00"	SLiC 5X33 FB	SLiC 5X33 FB	--
	3.80"	SLiC 7X33 FB	SLiC 7X33 FB	--
	3.80"	SLiC 9X36 FB	SLiC 9X36 FB	--
	1.50"	GATM92000	GATM92000	--
	2.50"	GATM95000	GATM95000	--
	4.00"	GATM97000	GATM97000	--
Thomas&Betts	1.00"	C-3500	C-3500	--
	1.50"	C-3501	C-3501	--
	1.75"	C-3502	C-3502	--
	2.125"	C-3503	C-3503	--
	2.75"	C-3504	C-3504	--
	3.125"	C-3505	C-3505	--
	4.50"	C-3506	C-3506	--
	6.00"	C-3507	C-3507	--
	7.50"	C-3509	C-3509	--
9.00"	C-3508	C-3508	--	
Tyco Electronics	0.75"	TRAC - AA	TRAC - AA	--
	1.26"	TRAC - A	TRAC - A	--
	1.89"	TRAC - B	TRAC - B	--
	2.56"	TRAC - B+	TRAC - B+	--
	3.27"	TRAC - C	TRAC - C	--
URASEAL	1.2"	CA1900WE-A1S	CA1900WE-A1S	--
	1.8" *	CA1900WE-B1S	CA1900WE-B1S	--
	2.5" *	CA1900WE-C1S	CA1900WE-C1S	--

\*The branch type will accommodate maximum cable dia. of 2.2" and 3.0", respectively.

See page 2.1.5 for notes.

2.1.1  
6-03  
pl

pl - Splice Closure

<u>Manufacturer</u>	<u>Max. Cable Dia.</u> <sup>(6)</sup>	<u>Straight</u>	<u>Branch</u> <sup>(4)</sup>	<u>Encapsulant</u> <sup>(2)</sup>
<b><u>a - Aerial Splice Closure for Copper Cables</u></b>				
<b><u>Pressurized</u></b>				
3M Company (510 Version)	1.0"	2X2AA	2X2AA	--
	1.0"	2Y2AA	2Y2AA	--
	1.6"	2A2	2A2	--
	2.9"	2B2	2B2	--
	3.5"	2C2	2C2	--
	3.5"	2D2	2D2	--
	4.5"	2E2	2E2	--
Preformed Line Products	2.2"	8006021	8006021	--
	4.1"	8006022	8006022	--
	6.85"	8006023	8006023	--
	4.1"	8006024	8006024	--
	6.85"	8006025	8006025	--
	10.1"	8006177	8006177	--
	10.1"	8006219	8006219	--
	10.1"	8006220	8006220	--
10.1"	8006221	8006221	--	

**b - Buried Splice Closure for Copper Cables**

<b><u>Filled</u></b>				
3M Company	0.58"	8981-4462/GEL	--	8882GEL
	1.0"	8982-4462/GEL	--	8882GEL
	1.2"	--	BB2 x 24 4462/GELLA SC, DC-LHS	8882GEL
	1.5"	8983-4462/GEL	--	8882GEL
	1.7"	--	BB3 x 24 4462/GELLA SC, DC-LHS	8882GEL
	2.0"	8984-4462/GEL	BB4 x 24 4462/GELLA SC, DC-LHS	8882GEL
	2.4"	8985-4462/GEL	BB5 x 26 4462/GELLA SC, DC-LHS	8882GEL
	3.33"	8986-4462/GEL	--	8882GEL
	3.3"	--	BB6 x 26 4462/GELLA 2DC-LHS	8882GEL
	3.6"	--	BB7 x 26 4462/GELLA 2DC-LHS	8882GEL
	3.8"	--	BB9 x 26 4462/GELLA 2DC-LHS	8882GEL

See page 2.1.5 for notes.

<u>Manufacturer</u>	<u>Max. Cable Dia.<sup>(6)</sup></u>	<u>Straight</u>	<u>Branch</u>	<u>Encapsulant<sup>(2)</sup></u>
<b><u>b - Buried Splice Closure for Copper Cables</u></b>				
<b><u>Filled</u></b> (Cont'd)				
Preformed Line Products	2.2"	8006287	8006287	RD
	4.1"	8006288	8006288	RD
	4.1"	8006289	8006289	RD
	7.1"	8006290	8006290	RD
	7.1"	8006291	8006291	RD
	7.1"	8006292	8006292	RD
	10.1"	8006293	8006293	RD
	10.1"	8006294	8006294	RD
	10.1"	8006295	8006295	RD
Tyco Electronics	.35"	XAGA 1650-S	XAGA 1650-S	CasChem 165
	.48"	XAGA 1650-A	XAGA 1650-A	CasChem 165
	.48"	XAGA 1650-AA	XAGA 1650-AA	CasChem 165
	.48"	XAGA 1650-A2	XAGA 1650-A2	CasChem 165
	.48"	XAGA 1650-A4	XAGA 1650-A4	CasChem 165
	1.10"	XAGA 1650-B2	XAGA 1650-B2	CasChem 165
	1.10"	XAGA 1650-B4	XAGA 1650-B4	CasChem 165
	1.85"	XAGA 1650-C2	XAGA 1650-C2	CasChem 165
	1.85"	XAGA 1650-C4	XAGA 1650-C4	CasChem 165
	2.00"	XAGA 1650-D2	XAGA 1650-D2	CasChem 165
	2.00"	XAGA 1650-D4	XAGA 1650-D4	CasChem 165
Tyco Electronics (CERTI-SEAL)	Series 6 & 59	569224-1		Sealant 20
	Series 7 & 11	569661-1		Sealant 20
	.29 - .46 (Tel.) & Series 6, 7, 11, 59 (Coax)	569671-1	569671-1	Sealant 20
	.29 - .46	569579-1	569579-1	Sealant 20
	.29 - .46	1116449-1	1116449-1	Sealant 20
	.35 - .57	1217195-1	1217195-1	Sealant 20

**c - Underground Splice Closure (Manhole) for Copper Cables**

**Filled**

2.1.3  
1-03  
pl

**pl - Splice Closure**

<b><u>Manufacturer</u></b>	<b><u>Max. Cable Dia.<sup>(6)</sup></u></b>	<b><u>Straight</u></b>	<b><u>Branch</u></b>	<b><u>Encapsulant<sup>(2)</sup></u></b>
<b><u>c - Underground Splice Closure (Manhole) for Copper Cables</u></b>				
<b><u>Pressurized</u></b>				
3M Company (510 Version)	2.9"	2B2	2B2	--
	3.5"	2C2	2C2	--
	3.5"	2D2	2D2	--
	1.0"	2X2AA	2X2AA	--
	1.0"	2Y2AA	2Y2AA	--
	1.6"	2A2	2A2	--
	4.5"	2E2	2E2	--
Preformed Line Products	2.2"	8006021	8006021	--
	4.1"	8006022	8006022	--
	6.85"	8006023	8006023	--
	4.1"	8006024	8006024	--
	6.85"	8006025	8006025	--
	10.1"	8006219	8006219	--
	10.1"	8006220	8006220	--
Thomas&Betts	1.0"	C-5100	C-5105	--
	1.6"	C-5101	C-5106	--
	2.2"	C-5102	C-5107	--
	3.0"	C-5103	C-5108	--
	3.0"	C-5104	C-5109	--

**d - Buildings and Central Office Vault Splice Closure for Copper Cables<sup>(3)</sup>**

**Non-Filled**

	<b><u>Non-Flame Retardant<sup>(9)</sup></u></b>	<b><u>Flame Retardant</u></b>
3M Company (Kohler & Besser)	K & B Series	K&B Series <sup>(5)</sup>
	2 * 2 (*)	2 * 4 (*)
Preformed Line Products	8006 Series	8006 FR Series

\*Insert inner diameter and cover length identifying data according to manufacturer's instructions.

See page 2.1.5 for notes.

pl - Splice Closure

<u>Manufacturer</u>	<u>In-Line</u>	<u>Butt</u>	<u>Branch</u>	<u>Encapsulant</u> <sup>(2)</sup>	<u>Maximum Splice Capacity</u> <sup>(8)</sup>
<b><u>e - Aerial Splice Closure for Fiber Optic Cables</u><sup>(1)</sup></b>					
<b><u>Filled</u></b>					
Preformed Line Products	8001006	8001005	8001006	RD	72
Tyco Electronics	--	FOSC450-B6-NT-0-B3V-RUS FOSC450-D6-NT-0-D6V-RUS	FOSC450-B6-NT-0-B3V-RUS FOSC450-D6-NT-0-D6V-RUS	GEL GEL	144 576
<b><u>Non-Filled</u><sup>(7)</sup></b>					
AFL	LG-50	LG-50	-	--	18
	--	LG-100	LG-100	--	36
	--	LG-200	LG-200	--	96
	--	LG-300	LG-300	--	384
	--	LG-300XL	LG-300XL	--	864
	LG-410	LG-410	LG-410	--	72
	LG-420	LG-420	LG-420	--	12
	LG-500	LG-500	LG-500	--	72
	LG-600	LG-600	LG-600	--	288
3M Company	--	FD06	FD06	--	48
	--	FD08	FD08	--	96
	2178S	2178S	2178S	--	96
	2178LS	2178LS	2178LS	--	480
Multilink Broadband (Starfighter)	1120F-GK01 2000F-GK01	1120F-GK01 2000F-GK01	1120F-GK01 2000F-GK01	-- --	24 72
Preformed Line Products	-- 8006661 8006659 8006660	8006692 8006661 8006659 8006660	8006692 8006661 8006659 8006660	-- -- -- --	24 48 144 288
Tyco Electronics		FOSC400-A4-NT-0-NGV-RUS FOSC400-B2-NT-0-NGV-RUS FOSC400-B4-NT-0-NGV-RUS FOSC400-D5-NT-0-NGV-RUS	FOSC400-A4-NT-0-NGV-RUS FOSC400-B4-NT-0-NGV-RUS FOSC400-B4-NT-0-NGV-RUS FOSC400-D5-NT-0-NGV-RUS		48 96 96 576
<b><u>f - Buried Splice Closure for Fiber Optic Cables</u><sup>(1)</sup></b>					
<b><u>Filled</u></b>					
3M Company	2177-R	2177-R	2177-R	8882	64
Preformed Line Products	8001006	8001005	8001006	RD	72
Tyco Electronics	--	FOSC450-B6-NT-0-B3V-RUS FOSC450-D6-NT-0-D6V-RUS	FOSC450-B6-NT-0-B3V-RUS FOSC450-D6-NT-0-D6V-RUS	GEL GEL	144 576

See page 2.1.5 for notes

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1-03  
pl

pl - Splice Closure

Manufacturer

**g - Buildings and Central Office  
Vault Splice Closure for Fiber Optic Cables**

Non-Filled

	<u>Non-Flame Retardant<sup>(9)</sup></u>	<u>Flame Retardant</u>
3M Company	2178S	2178 FOSC
Lucent Technologies	--	UCB1
Preformed Line Products	8006659 8006660 8006661	8001010 8001011

- Notes:** (1)Fiber organizer trays shall be ordered in accordance with manufacturer's instructions.  
(2)The encapsulant is a component part of the splice closure system and shall be provided by the closure manufacturer. The encapsulant is not accepted on an individual basis.  
(3)The main cable diameter, cable configuration (number of cables, pair count and gauge), and splice bundle diameter should be specified by the engineer.  
(4)3M Better Buried closures are accepted for Branch splicing only.  
(5)For vertical installations order standard closure with "5925 FireBarrier Shield."  
(6)Metric sizes available for the following manufacturers: 3M.  
(7)These closures may also be installed in pedestals.  
(8)Maximum capacity for fusion splices.  
(9)Non-flame retardant cases shall not be placed in a building or central office, they may be placed in a cable vault.

**hc - Underground Conduit**

<b><u>Manufacturer</u></b>	<b><u>Type Conduit</u></b>	<b><u>Catalog Number</u></b>
Allwire, Inc.	Flexible plastic	ALLDUCT
American Pipe & Plastics	Plastic Plastic Plastic	Type B, C, and D Type EB and DB PVC Multi-Duct (2,3,4 and 6-way)
Apache Plastics, Inc.	Plastic	Type EB and Type DB
Arnco	Flexible plastic	HDPE Conduit
Blue Diamond Industries, LLC	Flexible plastic	HDPE Duct
Bristolpipe	Plastic Plastic	Type B, C, and D Type EB and Type DB
Cantex	Plastic Plastic Plastic Plastic	Type EB and Type DB Type B, C, and D Schedule 40 Schedule 80
Carlton/Pyramid	Plastic Plastic (Telephone Duct) Plastic Flexible Plastic Plastic	Type EB, Type DB Type B <sup>(1)</sup> , Type C <sup>(1)</sup> , and Type D <sup>(1)</sup> Multi-Gard <sup>(1)</sup> HDPE Conduit <sup>(2)</sup> BORE-GUARD (Sch. 40 & 80) <sup>(2)</sup>
Certain-Teed Products Corp.	Plastic	Type EB and Type DB
CommScope	Flexible plastic	SDR 13.5, SCH 40 (1/2" – 4")
CSR Polypipe	Flexible plastic	HDPE Duct
Dura-line	Flexible plastic	HDPE Duct
Endot Industries	Flexible plastic	HDPE Duct
Flying "W" Plastics	Flexible plastic	HDPE Duct
Freedom Plastics, Inc.	Plastic	Type C
Heritage Plastics	Plastic	PVC Types EB, DB, Sch. 40 and Sch. 80
Hurlbut Plastic Pipe	Plastic	Type C
Imperial Pipe Corp.	Flexible plastic	HDPE Duct
IPEX, Inc.	Flexible plastic (Fibertel)	EPEC-(B, 40, SDR11, 80)-HDPE 1" – 4"
J-M Manufacturing Company	Plastic	Types C, EB, and DB

See page 2.2.1 for notes.

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**hc - Underground Conduit**

<b><u>Manufacturer</u></b>	<b><u>Type Conduit</u></b>	<b><u>Catalog Number</u></b>
National Pipe & Plastics, Inc.	Plastic Plastic	Type EB and Type DB Type B and Type C
Northern Pipe Products	Plastic	Type B, C, and D
OMNI	Flexible plastic Plastic	HDPE Duct Multiple plastic conduit (3 & 4 Way)
OSI Plastics	Flexible plastic	EPEC-A-HDPE 1" – 4"
Performance Pipe	Flexible plastic	DRISCOPLEX Duct
Petroflex	Flexible plastic Flexible plastic	HDPE Duct Corrugated HDPE Duct
PWPipe	Plastic Flexible plastic	PVC Types EB, DB, and Sch. 40 HDPE Coiled Duct
Queen City Plastics	Plastic	Type EB and Type DB
Sedco	Plastic	Type EB and Type DB
Southern Pipe, Inc.	Plastic	PVC Types EB, DB, and Sch. 40
Summit Sales, Inc.	Plastic	Type B and Type C
Tamaqua Cable Products	Flexible plastic	HDPE Duct
Wesflex	Flexible plastic	Flex-Con

**Note:** For fiber and plastic conduit, Type I, Type B or Type EB is for concrete encasement and Type II, Type C or Type DB may be directly buried. Schedule 40 is a high strength conduit that may be used for concrete encasement or direct burial. Type D is for exposed installation, as on bridges.

<sup>(1)</sup>Filament wound fiberglass/epoxy conduit.

<sup>(2)</sup>Carlton brand only.

<sup>(3)</sup>Pyramid brand only.

**er - Cable Enclosures**

**er-a Ready Access Enclosures (Enclosures Only)**

**Lashed Cables**

<b><u>Manufacturer</u></b>	<b><u>Main Cable Dia. Range</u></b>	<b><u>Straight</u></b>	<b><u>Branch</u></b>
3M	0.40-4.00"	SLIC <sup>(5)</sup>	SLIC <sup>(5)</sup>
Marconi Communications	0.4-1.2"	100 MB <sup>(7)</sup>	100 MBY <sup>(7)</sup>
	1.2-2.0"	200MB <sup>(7)</sup>	200MBY <sup>(7)</sup>
	2.0-3.0"	430	430Y
Thomas&Betts	0.50-2.20"	Termax C-2280	-

See page 2.3.2 for notes.

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**er - Cable Enclosures**

**er-b Ready-Access Enclosures (Enclosures Only)**

**Strand-mounted, with two branch entrances (for lashed cables)**

<b><u>Manufacturer</u></b>	<b><u>Type E</u></b>		<b><u>Type F</u></b>	
Diameter of main:	1.2" Maximum		2.2" Maximum	
Diameter of branch:	0.75" Maximum		1.6" Maximum	
Type of strand:	<b><u>Galvanized Steel</u></b>	<b><u>Alum.-Clad Steel</u></b>	<b><u>Galvanized Steel</u></b>	<b><u>Alum.-Clad Steel</u></b>
Marconi Communications	200MBY	200MBY	200MBY	200MBY

**er-c Ready-Access Enclosures e/w with IDC Terminal Blocks  
(Fixed Count Enclosures)**

**Strand-mounted, with two branch entrances (for lashed cables)**

**Filled Unprotected**

	<b><u>Main Cable Dia. Range</u></b>	<b><u>Branch Cable Dia. Range</u></b>	<b><u>Series</u></b>
3M Company	0.40-4.00" 0.30-4.00" <sup>(1)</sup>	- 0.30-4.00"	SLIC <sup>(2)(6)</sup> GATM
Thomas&Betts	0.50-2.20"	-	Termax
Tyco Electronics	0.55-1.90"	0.00-1.50"	DTerminator 2 ICT

See page 2.3.2 for notes.

**er - Cable Enclosures**

**er-d Ready-Access Enclosures e/w Binding Post Terminal Blocks (Fixed Count Enclosures)**

**Strand-mounted, with two branch entrances (for lashed cables)**

**Manufacturer**

**Filled Unprotected**

	<b><u>Main Cable Dia. Range</u></b>	<b><u>Branch Cable Dia. Range</u></b>	<b><u>Variable</u></b>
Marconi	0.40-1.20"	0.40-0.80"	100MBY <sup>(3)</sup>
Communications	1.20-2.20"	0.40-1.60"	200MBY <sup>(3)</sup>
	2.00-3.00"	1.10-2.20"	430MBY <sup>(3)</sup>

**Filled Protected**

	<b><u>Main Cable Dia. Range</u></b>	<b><u>Branch Cable Dia. Range</u></b>	<b><u>Variable</u></b>
Marconi	0.40-1.20"	0.40-0.80"	100MBY <sup>(4)</sup>
Communications	1.20-2.20"	0.40-1.60"	200MBY <sup>(4)</sup>
	2.00-3.00"	1.10-2.20"	430MBY <sup>(4)</sup>

Notes:

- <sup>(1)</sup>The diameter range shown only includes the unprotected versions of the RGTA-type Marconi terminal blocks.
- <sup>(2)</sup>Specify 3M PSI or Raychem (Tyco) terminal blocks when ordering.
- <sup>(3)</sup>May be ordered with up to 24 pairs using the 145BG Marconi Communications terminal block only.
- <sup>(4)</sup>May be ordered with up to 12 pairs using the 381G and 383G Marconi Communications terminal blocks only.
- <sup>(5)</sup>Includes the following catalog numbers only: 328 & 530 MT, 328 & 530-MT/SES, 328 & 530-MTA/SES, 328 & 530-MTC/RES, 328 & 530-MTC/SES, and 328 & 530-MTPI/SES.
- <sup>(6)</sup>Includes the following catalog numbers only: 328-G, 328-PI/SES, and 530-PI/SES.
- <sup>(7)</sup>Messenger insulator ordered separately. For 100MB or 100MBY order P10318. For 200MB or 200MBY order P10709.

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hh - Handholes(1)(2)

Handholes for Copper Systems

<u>Manufacturer</u>	<u>Catalog Number</u>
Armorcast	6001946 (13x24) 6001640 (17x30) 6001974 (24x36) 6001436 (36x60)
Brooks Products	1324 1730
Carson Industries	1730-13B
CDR Systems (Homac)	TA-1324 TA-1730 TA-3660 TA-2436 TA-3048W TA-3048 TA-3060
Charles Industries, Ltd.	FMH 361 FMH 362 FMH 363
NewBasis	S1324 S1730 FC243618-10K FC304818-10K FC304836-10K FC366018-20K FC366036-20K
Northwest Pipe & Tank, Inc.	#8-C124 (4'x10"x3'4"x2'6") <sup>(4)</sup>
Pen-Cell Plastics	PE-10 PE-20 (Restricted to cable sizes up to 100 pairs) PE-36 PE-6HD PE-9HD PE-14HD PE-30HD PE-20HD PE-20U PE-20F PE-30U PE-30F PEM Series

See page 2.4.3 for notes.

hh - Handholes(1)(2)

Handholes for Copper Systems (Cont'd)

<u>Manufacturer</u>	<u>Catalog Number</u>
Quazite	PC1324 PC1730 PX1324 PX1730
TDB Communications (Common Ground Enclosure)	TDB-GB-T <sup>(5)</sup>
Tunnel Mill Polymer, Inc.	R264836
Utility Vault	3642-BL <sup>(4)(6)</sup> (2'8"x3'6"x4') 25-TA (5'2½"x2'3"x2'6")

See page 2.4.3 for notes.

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hh - Handholes<sup>(1)(2)</sup>

Handholes for Fiber Optic Systems

<u>Manufacturer</u>	<u>Catalog Number</u>
Armorcast	6001974 (24x36) 6001430 (30x48) 6001742 (30x60) 6001436 (36x60) 6001691 (39x30DI)
Blue Diamond Industries, LLC	MOV-2S/D <sup>(3)</sup>
CDR Systems (Homac)	TA-1730F TA-2436F TA-3048WF TA-3048F TA-3060F TA-3660F TA-4848F TA-4872F TA-4878F TA-4896F
Charles Industries, Ltd.	FMH 361 FMH 362 FMH 363
Coastal Engineered Products	38-00520 38-00521 38-00522 38-00523
NewBasis	FC132418-20K FC173018-20K FC243618-20K FC304818-20K FC304836-20K SG5400-SW FC366018-20K FC366036-20K
Northwest Pipe & Tank, Inc.	#8-C124 (4'10"x3'4"x2'6") <sup>(4)</sup>
Pen-Cell Plastics	PE-14HD PE-20HD PE-20U PE-20F PE-30HD PE-30U PE-30F PE-36HD PE-36A PEM Series

See page 2.4.3 for notes.

**hh - Handholes**(1)(2)

**Handholes for Fiber Optic Systems (Cont'd)**

<b><u>Manufacturer</u></b>	<b><u>Catalog Number</u></b>
Quazite	PG2436 PG3048 LG3060 LG3660 LR2732
Tunnel Mill Polymer, Inc.	R264836

- Notes:** (1)Not for use in areas subject to vehicular traffic, unless otherwise noted.
- (2)Consult the manufacturer for ordering procedures for handhole depth and lid/cover locking devices and load bearing capacity.
- (3)Rated for use in areas subject to vehicular traffic.
- (4)Light vehicular traffic only (H10)
- (5)Lugs kits available from TDB.
- (6)Only the 3642-2436P cover is RUS accepted for use with this handhole.

**se - Buried Plant Housings**  
(Complies with 7 CFR 1755.910)

**Type BD Pedestals**

Listed manufacturers are accepted to supply housing types as indicated by X's.

**Type H Pedestals**

<b><u>Manufacturer</u></b>	<b><u>Series</u></b>	<b><u>Notes</u></b>	<b><u>Pedestal Mounted</u></b>				<b><u>Pole Mounted</u></b>		
			<b><u>BD3</u></b>	<b><u>BD4</u></b>	<b><u>BD5</u></b>	<b><u>BD7</u></b>	<b><u>BD3A</u></b>	<b><u>BD4A</u></b>	<b><u>BD5A</u></b>
Channell	MAH	(15)	X	X	X	X	-	-	-
Charles Industries, Ltd.	(Pedlock BD)	(2)(3)(15)	X	X	X	X	X	X	X
Corning Cable Systems	(BD)	(1)(2)(3)	X	X	X	X	X	X	X
Marconi Communications	(UPC, FLOODPLUG, ProFORM)	(1)(2)(3)(7)(10)	X	X	X	X	X	X	X

See page 2.5.2 for notes.

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**se - Buried Plant Housings**  
(Complies with 7 CFR 1755.910)

**Type BD Pedestals**

Listed manufacturers are accepted to supply housing types as indicated by X's.

<b><u>Manufacturer</u></b>	<b><u>Series</u></b>	<b><u>Notes</u></b>	<b><u>Designation</u></b>								
			<b><u>Type M Pedestals</u></b>			<b><u>Pole Mounted</u></b>			<b><u>Pole Mounted</u></b>		
			<b><u>Pedestal Mounted</u></b>			<b><u>Pole Mounted</u></b>			<b><u>(Increased Hgt. Above Grd.)</u></b>		
			<b><u>BD14</u></b>	<b><u>BD15</u></b>	<b><u>BD16</u></b>	<b><u>BD14A</u></b>	<b><u>BD15A</u></b>	<b><u>BD16A</u></b>	<b><u>BD14AG</u></b>	<b><u>BD15AG</u></b>	<b><u>BD16AG</u></b>
Channell	MAH		X	X	X	-	-	-	-	-	-
Charles Industries, Ltd.	(Pedlock BD)	(2)(3)	X	X	X	X	X	X	X	X	X
Marconi Communications	(FLOODPLUG, ProFORM)	(2)(3)(10)	X	X	X	X	X	X	X	X	X

**Large Count Splice Cabinets**

			<b><u>BD6000</u></b>	<b><u>BD8000</u></b>	<b><u>BD10000</u></b>
Marconi Communications	(UPCBD)	(2)(3)(10)(14)	-	X	-

See page 2.5.2 for notes.

**se - Buried Plant Housings  
(Complies with 7 CFR 1755.910)**

**Type BDS Serving Area Interface Cabinet<sup>(4)</sup>**

<b><u>Manufacturer</u></b>	<b><u>Designation</u></b>	
	<b><u>Terminal Type<sup>(5)</sup></u></b>	<b><u>Cabinet Series</u></b>
3M	3M SS Block	4000 <sup>(6)</sup> 4300 <sup>(6)</sup> 4220 <sup>(6)</sup> 4230 4900
Marconi Communications	RLS Module	UPC/BDS RSK/RSL Starburst Aerial UltraCab
Tyco Electronics	HubSnap	NGXC <sup>(12)(16)</sup> BK/BL <sup>(11)(16)</sup>

**Fiber Optic Splice Case Housings**

	<b><u>Stake Mounted</u></b>	<b><u>Pad Mounted</u></b>	<b><u>Pole Mounted</u></b>
Corning Cable Systems	OFC-BD7 <sup>(8)(9)</sup>	OFC-BD7 <sup>(8)(9)</sup>	OFC-BD7 <sup>(8)</sup>
Marconi Communications	OPFO-BD7PD <sup>(8)(9)</sup>	OPFO-BD7PD <sup>(8)(9)</sup>	OPFO-BD7PL <sup>(8)</sup>

- Notes:**
- (1) Internal offset brackets for the BD3, BD4, and BD5 sizes are available upon request.
  - (2) Grounding connectors for field mounting within the housings for terminating #6 AWG solid copper ground wire are available upon request.
  - (3) Good housekeeping panels are available upon request, sizes BD3 and above. When ordering, suffix the catalog number with the letter "H".
  - (4) SAI housings equipped with two doors, front and back are also available upon request.
  - (5) Use the block or module recommended by the SAI manufacturer.
  - (6) Only the 4065, 4295, and 4365 may be pole mounted.
  - (7) BD7 may be pad mounted.
  - (8) Order mounting hardware for the intended splice case in accordance with the manufacturer's instructions.
  - (9) Order pad or stake mounting hardware in accordance with the manufacturer's instructions.
  - (10) For additional bonding and grounding requirements, extension brackets GBREXT, GBREXTKIT, and GBRALT are available upon request.
  - (11) Pole Mounted Only.
  - (12) Beige color may be used.
  - (14) UPCBD8000 may be stake mounted.
  - (15) These pedestals are type "M" pedestals (dome) that meet the functional criteria of type "H" pedestals.
  - (16) If ordered stubbed, cables must be RUS accepted.

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**sj - Central Office Splice Housings<sup>(1)</sup>**

**sj-a Splice Housings for Copper Cables**

<b><u>Manufacturer</u></b>	<b><u>Designation</u></b>		
	<b><u>Catalog Number</u></b>	<b><u>Tip Cable Openings</u></b>	<b><u>Cable Capacity</u></b>
Marconi Communications	CRF54ARV	54	5400
	CRF66ARV	66	6600

**sj-b Wall Mount Splice Housings for Fiber Optic Cables**

	<b><u>Catalog Number</u></b>	<b><u>Mech. Splices</u></b>	<b><u>Fiber Capacity</u></b>	<b><u>Fusion Splices</u></b>
3M	8570	144		192
Fiber Optic Network Solutions (FONS)	WSU-72	72		72
	VSC-288	288		288
	ESC-432 <sup>(4)</sup>	432		432
	ESC-864A <sup>(4)</sup>	864		864

**sj-c Rack Mount Splice Housings for Fiber Optic Cables**

	<b><u>Catalog Number</u></b>	<b><u>Mech. Splices</u></b>	<b><u>Fiber Capacity</u></b>	<b><u>Fusion Splices</u></b>
ADC	FPL-SR2000	96		96
Fiber Optic Network Solutions (FONS)	HRC-5SU	72		72

See page 2.5.4.2 for notes.

**sj - Central Office Splice Housings<sup>(1)</sup>**

**sj-d Wall Mount Splice Housings with Patch Panels for Fiber Optic Cables<sup>(2)</sup>**

<b><u>Manufacturer</u></b>	<b><u>Designation</u></b>	<b><u>Max. Fiber Terminations</u></b>
	<b><u>Catalog Number</u></b>	
ADC	FIP <sup>(3)</sup>	12
	FIPL <sup>(3)</sup>	24
Americable, Inc.	FLP-1W	24
3M	8432	12
	8434	24
	8436	48
Fiber Optic Network Solutions (FONS)	LX-1012	12
	TIC-12PS	12
	LX-1024	24
	WPS-24	24
	TIC-24PS	24
	STIC-24PS	24
	TIC8E <sup>(3)</sup>	24
	LX-1048	48
	TIC18E	48
	TIC24E	72
LX-1096	96	
TIC31E	144	

See page 2.5.4.2 for notes.

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**sj - Central Office Splice Housings**<sup>(1)</sup>

**sj-e Rack Mount Splice Housings with Patch Panels for Fiber Optic Cables**<sup>(2)</sup>

<b><u>Manufacturer</u></b>	<b><u>Designation</u></b>	<b><u>Max. Fiber Terminations</u></b>
	<b><u>Catalog Number</u></b>	
ADC	FMPS	36
	FMPL	72
Americable, Inc.	FLP-1	144
3M	8423	48
	8425	144
Fiber Optic Network Solutions (FONS)	LX-LP12B	12
	LX-LP <sup>(5)</sup>	24
	HRC- <sup>(6)</sup>	24
	LX-LP36N	36
	LX-MP3U	48
	HRC-7PSF	48
	LX-MP72B	72
	HRC- <sup>(7)</sup>	72
	HRC-9P	144
	HR-11 <sup>(8)</sup>	216

See page 2.5.4.2 for notes.

sj – Central Office Splice Housings<sup>(1)</sup>

sj-f Wall or Rack Mount Splice Housings with Patch Panels for Fiber Optic Cables<sup>(2)</sup>

<u>Manufacturer</u>	<u>Designation</u>	<u>Max. Fiber Terminations</u>
	<u>Catalog Number</u>	
ADC	FCP-08 <sup>(3)</sup>	8
	FCP-12 <sup>(3)</sup>	12
	FDP	24
Fiber Optic Network Solutions (FONS)	MDC5	24
	MDC7	48
	MDC10	72
	MDC14	144
	MDC18	216
Porta Systems	CPS-12 <sup>(3)</sup>	12
	CPS-24 <sup>(3)</sup>	24
	FOCUS	48
	FOCUS	72

- Notes:**
- <sup>(1)</sup>Recommended for use only in central offices with restricted access to unauthorized personnel.
  - <sup>(2)</sup>Consult the manufacturer for ordering procedures concerning splice capacity, connector options, pigtails, or jumpers and stub options.
  - <sup>(3)</sup>UL listed and may also be used as a Fiber Optic Cable Building Entrance Terminal.
  - <sup>(4)</sup>Does not include “Bullet Bond” Shield Bonding Connector.
  - <sup>(5)</sup>Replace blank with 1UB or 24B.
  - <sup>(6)</sup>Replace blank with 3.5PS or 5PS.
  - <sup>(7)</sup>Replace blank with 7P or 7PS.
  - <sup>(8)</sup>Replace blank with letter(s) P or PS.

**sk - Pedestal Restricted Access Inserts<sup>(1)</sup>**

<b><u>Manufacturer</u></b>	<b><u>Catalog No.</u></b>	<b><u>Max. Splice Diameter</u></b>	<b><u>Maximum Splice Sizes</u></b>	
			<b><u>25xModules</u></b>	<b><u>Single Pair Connector</u></b>
3M	4604	64mm (2.5 in.)	100-Pair	50-Pair
	4606	99mm (3.9 in.)	300-Pair	100-Pair
	4608	135mm (5.3 in.)	600-Pair	300-Pair
	4634	57mm (2.25 in.)	100-Pair	50-Pair
	4635	102mm (4.0 in.)	300-Pair	100-Pair
	4636	137mm (5.4 in.)	600-Pair	300-Pair
	4636-XL	140mm (5.5 in.)	900-Pair	400-Pair
	4637-XL	191mm (7.5 in.)	1200-Pair	400-Pair
Tyco Electronics	PedCap-RE-2G	48mm (1.9 in.)	20-50-Pair	25-50-Pair
	PedCap-RE-3G	76mm (3.0 in.)	25-200-Pair	25-200-Pair
	PedCap-RE-4G	84mm (3.3 in.)	100-400-Pair	100-400-Pair
	PedCap-RE-6G	114mm (4.5 in.)	200-900-Pair	200-900-Pair
	GT-3 <sup>(2)</sup>	66mm (2.6 in.)	25-100-Pair	25-100-Pair
	GT-4 <sup>(2)</sup>	91mm (3.6 in.)	50-400-Pair	50-400-Pair
	GT-6 <sup>(2)</sup>	109mm (4.3 in.)	100-900-Pair	100-900-Pair
Uraseal	SAP-IICPR3N	76mm (3.0 in.)	200-Pair	200-Pair
	SAP-IICPR4N	102mm (4.0 in.)	300-Pair	300-Pair
	SAP-IICPR5N	127mm (5.0 in.)	400-Pair	400-Pair

**Notes:** <sup>(1)</sup>Pedestal restricted inserts should not be filled. Splices that require filling should be placed in a splice case.

<sup>(2)</sup>Maximum splice sizes will vary with type of connector and/or gauge of cable used.

**ps - Buried Plant Housing Sealer**

<b><u>Manufacturer</u></b>	<b><u>Catalog Number</u></b>	
Courtaulds Aerospace	Semco PR-820-2	62 Cu. In.
	Semco PR-820-6	224 " "
	Semco PR-820-8	336 " "
	Semco PR-820-20	805 " "
	Semco PR-820	4200 " "
W. R. Grace	Polycel 100	
J.A.D.E., Ltd.	PIG 375 3 oz Volume	54 " "
	" 470 4 " "	84 " "
	" 650 6 " "	126 " "
	" 825 8 " "	171 " "
	" 1050 10 " "	324 " "
	" 1080 16 " "	540 " "
3M	4411 - A Bag	45 " "
	B Bag	95 " "
	C Bag	250 " "
	750 Gram Can	450 " "

**sp - Duct Sealer**

<b><u>Manufacturer</u></b>	<b><u>Catalog Number</u></b>	
Courtaulds Aerospace	Semco PR-821-2	27 Cu. In.
	Semco PR-821-6	75 " "
	Semco PR-821-8	110 " "
	Semco PR-821-20	317 " "
	Semco PR-821-1	3337 " "
3M	4416	
Tyco Electronics	TDUX <sup>(1)</sup>	-

**Notes:**

<sup>(1)</sup>Follow manufacturer's recommendation when ordering for appropriate duct sizes and/or maximum cable(s) outside diameters.

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hm - Precast Concrete Manholes<sup>(1)</sup>

<u>Manufacturer</u>	<u>Base Size</u>	<u>Catalog Number</u>
Advance Concrete Products	12' x 5' x 6'-6"	A Manhole
	12' x 6' x 7'	A-1 "
	8' x 4' x 6'	SA "
	8' x 4' x 6'	SJ "
	12' x 6' x 7'	J3-1 "
	12' x 6' x 7'	High-Mount T Carrier
	12' x 6' x 9'-6"	Manhole
	4' x 4' x 6'-9"	Telephone Vault
Amcor Inc.	3.5' x 5' x 3'	UV 3.553-REA-H
	3.5' x 5' x 3'	UV 3.553-REA-L
	4' x 6' x 7'	UVMB467
	6' x 8' x 7'	UVMB687-PM
	6' x 12' x 7'	UVMB6127
Armorcast	48" x 48" x 48"	A6000514HTAPC <sup>(4)</sup>
Brooks Products	4' x 4'	REA 300FPB42T
	4' x 8'	REA 4080FM72
	4'-6" x 8'-6"	REA 510FM78
	5' x 10'-6"	REA 650FM78
	5' x 12'	REA 6000FM78
	6' x 12'	REA 6000FM84
	6' x 12'	REA 6000DM84
Capitol Concrete Products, Inc.	4' x 8' x 3'	CCPMH 483
	4' x 8' x 6'	CCPMH 486
	4' x 8' x 7'	CCPMH 487
	4' x 8' x 8'	CCPMH 488
Elk River Concrete Products Company of Montana	5' x 5'-2"	EV 505.2-S
	5' x 5'-2"	EV 505.2-D
	5' x 9'-3"	EV 509.3-S
	5' x 9'-3"	EV 509.3-D
	5' x 13'-4"	EV 513.4-S
	5' x 13'-4"	EV 513.4-D
	4' x 6'	EV 406
	48" ROUND	EV 48-D
Foley-Brogdon	2' x 2'	Model 222
	3' x 3'	Model 333
	4'-2" x 4'-2"	Model 444
	6' x 6'	Model 6060
	4'-6" x 8'-6"	Model 8545
	5' x 10'-6"	Model 1050
	5' x 10'-6"	Model 1050S
	6' x 8'	Model 8060
	6' x 12'	Model 1260
	8' x 8'	Model 8080
	9' x 12'	Model 1290
	6' x 10'	Model 1060

See page 2.7.3 for notes.

**hm - Precast Concrete Manholes<sup>(1)</sup>**

<b><u>Manufacturer</u></b>	<b><u>Base Size</u></b>	<b><u>Catalog Number</u></b>
Hartford Concrete Products <sup>(2)</sup>	5' x 10'	REA 10-5 Series <sup>(2)</sup>
	4' x 8'	REA 8-4 Series
	4' x 4'	REA 4-4-4
Hawaii Precast, Inc.	3' x 5'	3x5 <sup>(3)</sup>
	4' x 6'-6"	4x6
	5' x 10'-6"	5x10
	6' x 12'	6x12
Jensen Pre-Cast Concrete Products Co.	3' x 5' x 3'	REA 3660-TA
	3' x 6' x 3'	REA 3672-TA
	4' x 4' x 4'	REA 4848
	4' x 6'-6" x 3'	REA 466-TA
	4'-6" x 8'-6" x 6'-6"	REA PTS-65
	5' x 10'-6" x 7'	REA 38-5706-U-7
	6' x 12' x 7'	REA 384-4046-1
	6' x variable x 9'	REA PTS-69
	6' x variable x 9'	REA PTS-69-I
LAR-KEN	4'8"x4'8"x4'8"	Series 350, Model LK
A.C. Miller Concrete Products Inc.	3' x 3'	REA-3x3
	4' x 4'	REA-4x4
	4' x 6'	REA-4x6
	4' x 7'-9"	REA-18
	4'-6" x 10'-6"	REA-20
	5' x 12'	REA-38Y
	6' x 12'	REA-38Y
	6' x 6'	REA-6x6
	6' x 8'	REA-6x8
	5' x 10'-6"	REA-5x10.6
	8' x 8'	REA-8x8
	10' x 10'	REA-10x10
	NewBasis	2'x2'x2', 2.5', & 3'
2'x3'x3'		1022
3'x5'x3'		35-H36-B
3'x6'x4.25'		GL3x6x51
3'x3'x3'		1145
4'x4'x4', 5', 6', 7', 8'		44-M-1PC
4'x4'x4.25'		GL4x4x51
4'x5'x4.25'		GL4x5x51
4'x6.5'x4'		GL4x6.5x48
4'x6.5'x7'		GL4x6.5x84
4'x8'x4', 5', 6', 7', 8'		48-M
4'x8'x7'		GL4x8x84
5'x5'x5', 6'		1605, 1610
5'x7'x7'		GL5x7x84
5'x10.5'x6', 6.5', 7'		1665, 1666, 1667
6'x8'x4'		GL6x8x48
6'x8'x7'		GL6x8x84
6'x12'x7'		1830-1
6'x12'x7'		GL6x12x84
6'x15'x4', 5', 6', 7', 8'		615-M
7'x7'x4', 5', 6', 7', 8'		77-M
8'x10'x4', 5', 6', 7', 8'		810-M
8'x8'x4', 5', 6', 7', 8'	88-M	
9.5'x9.5'x4', 5', 6', 7', 8'	9595-M	
10'x10'x4', 5', 6', 7', 8'	1010-M	
12'x12'x4', 5', 6', 7', 8'	1212-M	

See page 2.7.3 for notes.

**2.7.2**  
**1-03**  
**hm**

**hm - Precast Concrete Manholes<sup>(1)</sup>**

<b><u>Manufacturer</u></b>	<b><u>Base Size</u></b>	<b><u>Catalog Number</u></b>
Northwest Pipe & Tank, Inc.	4'-10" x 4'-10" x 4' 7' x 5' x 7'	#8-C244 #8-C257 <sup>(5)</sup>
Ornamental Poles, Inc.	6'-0" x 12'-0"	REA-Y
Pre Cast Concrete Company, Inc.	5'-10" x 10'-4" x 7'2"	Type AA
Pre-Cast Manufacturing Company	3'-6" x 6' 6' x 12' 5' x 10'	T-36656 T-6127 T-5107
R.C.P. Vaults (Division of Pacific International Pipe & Engineering, Inc.)	2'6" x 2'6" x 2' 2'3" x 5'2-1/2" x 2'6" 4'0" x 6'0" x 6'0" 5'0" x 9'0" x 7'2" 5'0" x 9'0" x 7'2" 5'8" x 11'2" x 7'5" 5'8" x 11'2" x 7'5" 6'0" x 12'0" x 7'0" 6'0" x 12'0" x 7'0" 7'0" x 12'0" x 7'6" 8'0" x 14'0"	76649 Handhole 25-TA Splicing Vault 466-TA 4484-TA 4484-TCA 5106-TA 5106-TCA 612-TA 612-TCA 712-CLS 814 (3)
Rotondo Precast	2' x 2' 3' x 3' 4' x 4' 4' x 6' 6' x 6' 6' x 8' 6' x 10' 6' x 12' 6' x 12' 6' x 12' 8' x 8'	RUS-22- RUS-33- RUS-44- RUS-46- RUS-66- RUS-68- RUS-610- RUS-612- -38Y RUS-6127- -OB RUS-6127- -SB RUS-88-
Southeast Precast Concrete Products Inc.	6' x 12' 4' x 8' 5' x 10' 4' x 4'	REA 127 REA 86 REA 510 REA 504

See page 2.7.3 for notes.

**hm - Precast Concrete Manholes<sup>(1)</sup>**

<b><u>Manufacturer</u></b>	<b><u>Base Size</u></b>	<b><u>Catalog Number</u></b>
Utility Concrete	3' x 4' x 4'	34 1/4
	8' x 4' x 6'	84 1/4
	22" x 22" x 36"	23 6/8
	2' x 2' x 2'-10"	22 2/10
	4' x 4' x 4'	44 1/4
	4' x 4' x 6'	44 3/4
	10' x 5' x 7'	105 1/4
	12' x 6' x 7'	126 1/16
	12' x 6' x 10'	126 3/16
	12' x 6' x 12'	126 5/16
	15' x 6' x 9'	156 1/4
	15' x 6' x 12'-6"	156 2/4
	Utility Precast Inc.	6' x 12'
5' x 10'		B Series
4-1/2' x 8-1/2'		C Series
Utility Vault	4' x 6'	466TA
	4'- 2" x 4'-2"	504-LA
	4'- 2" x 6'-6"	577-LA
	5'-10" x 10'-10"	510Y
	6'-10" x 12'-10"	38-612-Y
	2'3" x 5'2-1/2" x 2'4"	25 TA
	2'3" x 5'2-1/2" x 3'4"	253 TA
	3'1" x 6'7" x 4'1-1/2"	264 TA
	5' x 9' x 7'2"	4484-type
	5'4" x 9'4" x 7'6"	4686-type
	5'8" x 11'2" x 7'2"	5106-type
	6'1" x 11'7" x 7'5"	38Y-type
	8'8" x 10'8" x 8'6"	810 TA
	7'10" x 12'11" x 8'7"	712 LA
	8' x 14' x 6'6" through 12'	814-66 TA through 814-12 TA
	8' x 18' x 6'6" through 12'	818-66 TA through 818-12 TA
	3'8" x 5'8" x 4'9 1/2"	GTE35 Pullbox
	3'8" x 5'8" x 4'9 1/2"	GTE Intercept Pullbox
4'10" x 6'10" x 7'6"	467-TA	

- Notes:**
- (1) Consult manufacturer for ordering procedure concerning depth of the hole (Headroom), type of manhole (A, J, L, T), and extension sections.
  - (2) Equipped with 27-inch frame and cover made by Dewery Brothers Foundry.
  - (3) This manhole comes with an option for a D and L Foundry A1381 cast iron cover with security bolts.
  - (4) This manhole comes with Alhambra Foundry Cover, drawing No. A-1133.
  - (5) This manhole can be 6 feet in height.

2.8  
1-04  
sd

**sd - Mobile Home Posts**

<b><u>Manufacturer</u></b>	<b><u>Catalog Number</u></b>	
Charles Industries, Ltd.	3518 (Internally mounted protector)	3519 (Trailer mounted protector)
Corning Cable Systems	AMHP-1 <b>(2)</b>	-
Indiana Pressed Steel	THP-1E <b>(1)</b>	-
Marconi Communications	MHP <b>(2)</b>	-

**Notes:** (1)Limited to use in noncorrosive areas only.

(2) Adjustable to 3 feet, 3-1/2 feet, and 4 feet.

wt - Pole Mounted Wire Terminals

Manufacturer

Catalog Number

wt-a Unprotected Filled Blocks

	<u>1-Pair</u>	<u>10-Pair</u>	<u>12-Pair</u>	<u>20-Pair</u>	<u>25-Pair</u>	<u>30-Pair</u>	<u>50-Pair</u>
Channell	--	--	--	--	BMT60925B7 Series	--	BMT650B7 Series
Marconi Communications	5533G	--	--	--	--	--	--
Thomas&Betts	--	--	--	--	C-2516 <sup>(1)</sup>	--	C-2518 <sup>(1)</sup>
Tyco Electronics (D Terminator 2)	--	--	DT2-PMT <sup>(1)</sup>				

wt-b Protected Filled Blocks

25-Pair

Thomas&Betts	C-2517 <sup>(1)(2)</sup>
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**Note:** (1) Order stub cable length in accordance with manufacturer's instructions.

(2) These protected blocks use the Marconi Communications 1557 (R-800) cable-class "medium duty" arrester.

2.10  
11-03  
drk

**drk - Damage Repair Kits**<sup>(1)</sup>

<b><u>Manufacturer</u></b>	<b><u>Type Designation</u></b>
3M	4561 Armorcast Sheath Repair Kit <sup>(2)</sup>
Preformed Line Products	SERVISEAL Closure Series BLACK-JACK Closure Series
Thomas&Betts	Kold-N-Klose System

**Note:** <sup>(1)</sup>Damage repair kits are for RUS new construction purposes only.

<sup>(2)</sup>The Structural Armorcast Material included in this kit can be purchased by itself as “4560 Armorcast Structural Material.”

**oco - Fiber Cable Slack Organizer**

**Manufacturer**

Multilink Broadband

Tyco Electronics

**Product Series**

21\_\_<sup>(1)(2)</sup> (Sno-Shoe)

Lightrax System

**Notes:**

<sup>(1)</sup>Fill in blanks with available sizes - 10", 16", 21", 24".

<sup>(2)</sup>Available with ADSS Versions, staking kits, and extensions.

	<b><u>Item Designation</u></b>	<b><u>Page</u></b>
Connectors, shield bonding .....	gh .....	3.1
"    splicing .....	cm .....	3.1.2
Harnesses, bonding connector .....	gs .....	3.3
"    shield connector isolation .....	gt .....	3.3.2
Markers, cable .....	tm .....	3.2
Numerals, decal type .....	sm .....	3.5
Signs, warning .....	sm .....	3.5
Sleeves, filled plastic .....	sv .....	3.4

**gh - Shield Bonding Connectors**  
(Complies with PE-33)

**Manufacturer**

**Catalog Number**

**gh-a Copper Cable and Wire Connectors**

**Cable Connectors**

**Service Wire Connectors**

**Outside Cable Diameters**

	<b><u>Less than 1.0 inch</u></b>	<b><u>1.0 to 1.5 inch</u></b>	<b><u>Greater than 1.5 inch</u></b>	
A.K. Stamping	400-366-332 <sup>(2)</sup> (8544 B Bond #1)	400-366-340 (8544 B Bond #2)	400-366-357 (8544 B Bond #3)	-
Electric Motion	EM2__ <sup>(6)</sup> BM <sup>(7)</sup> EM2__ <sup>(6)</sup> B1 <sup>(8)</sup>	- EM2__ <sup>(6)</sup> B2 <sup>(9)</sup>	- EM2__ <sup>(6)</sup> B3 <sup>(10)</sup>	- EM-3956__(1) <sup>(3)</sup>
3M	4462SN	4462SN	4462SN	-
Preformed Line Products	-	-	-	8000733 <sup>(1)</sup> (Servi-Bond)

**gh-b Armored Fiber Optic Cable Connectors**

**Outside Cable Diameters**

	<b><u>Less than 0.75 inch</u></b>	<b><u>Greater than 0.75 inch</u></b>
A.K. Stamping	400366332-MB (Mini B Bond)	-
Electric Motion	EM2__ <sup>(6)</sup> BM <sup>(7)</sup> EM2__ <sup>(6)</sup> B1 <sup>(8)</sup>	EM2__ <sup>(6)</sup> B2 <sup>(9)</sup> EM2__ <sup>(6)</sup> B3 <sup>(10)</sup>
3M	4460D <sup>(4)</sup> 4460DFO <sup>(5)</sup>	4460D <sup>(4)</sup> 4460DFO <sup>(5)</sup>

See page 3.1.1 for notes.

**3.1.1**  
**10-03**  
**gh**

**Notes:**

- (1) For use only at station protector.
- (2) Not to be used on cables less than 0.50 inches in diameter.
- (3) Replace blank with either the letters H, R, RO, RR, RW, or RLB to indicate the type of mounting bracket to be used with the protector of the Network Interface Device (NID)
- (4) To be used with armored fiber optic cables using the central strength member design.
- (5) To be used with armored fiber optic cables using the strength member embedded in the outer jacket design.
- (6) Replace blank with the number 0 to indicate one (1) stud or the letter B to indicate two (2) studs.
- (7) For use with cables having outdoor diameters less than 0.5 inch.
- (8) For use with cables having outdoor diameters equal to and greater than 0.5 inch but less than 0.8 inch.
- (9) For use with cables having outside diameters equal to and greater than 0.8 inch but less than 1.6 inches.
- (10) For use with cables having outside diameters equal to and greater than 1.6 inches.

cm - Connectors

Manufacturer

Catalog Number

Splicing Connectors for Copper Conductors<sup>(2)</sup>

Splicing Connectors (1 Conductor)

Moisture Resistant Nonmoisture Resistant<sup>(1)</sup>

3M Company	Scotchlok™ UR2	-
	" UCC <sup>(4)</sup>	
	" UY2	
	" UB2A	
	" 211	
Tyco Electronics	552678-2(3 wts)	552795-4
	1-552678-2	1-552795-4
	552795-2	552966-4
	552966-2	555790-2
	553017-2 (Half-Tap ts)	60945-4
	1-553017-2	60947-3
	555790-1	
	555791-1	
	552965-2	

Splicing Connectors (1-Pair)

Moisture Resistant Nonmoisture Resistant<sup>(1)</sup>

Thomas&Betts	709	--
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Connector Modules (5-Pair)

Straight Splice Bridge Splice Half-Tap Splice

3M Company <sup>(5)</sup> (22-26 Awg)	710-SC1-5	710-BC1-5	710-TC1-5
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Connector Modules (10-Pair)

Straight Splice Bridge Splice Half-Tap Splice

Straight Splice Bridge Splice Half-Tap Splice

3M Company (22-26 Awg) (19-24 Awg)	710-SC1-25	710-BC1-25	710-TC1-25
	710-SCL-25	710-BC1-25	710-TCL-25
	4000-D/TR	4005-DPM/TR	4008-D/TR
	4000-DT/TR	4077-A <sup>(3)</sup>	4075-S <sup>(3)</sup>
	4075-S <sup>(3)</sup>	4077-B <sup>(3)</sup>	
		4077-C <sup>(3)</sup>	
	4077-D <sup>(3)</sup>		

See page 3.1.3 for notes.

3.1.3  
6-03  
cm

cm - Connectors

Manufacturer

Catalog Number

Splicing Connectors for Optical Fibers

	<u>Passive</u>	<u>Tunable</u>	<u>Mass</u>
3M Company	2529 Fibrlok II	-	-

- Notes:** (1) Nonmoisture resistant connectors are to be used only on plastic-insulated nonfilled cables utilizing airtight splice enclosures and when moisture protection is provided by pressurization.
- (2) Connectors in strip form may be used. Always use tool recommended by the manufacturer.
- (3) All listed 3M modules shall use the appropriate grease boxes (4075-S, 4077-A, 4077-B, 4077-C, or 4077-D) in all applications except pressurized cables.
- (4) For clearing and capping only.
- (5) Not to be used on 19-gauge waterproof cable with solid polypropylene or high density polyethylene insulated conductors.

**tm - Cable Markers**

**Manufacturer**

**Catalog Number**

**Color-Coded Tags**

Brady  
Hickory Printing Group, Inc.  
Tech Products  
U.G. Products

B-871<sup>(2)</sup>  
PC-2<sup>(3)</sup>  
EL2(series)  
100<sup>(1)</sup>

**Sleeves**

Multilink

MFM-12  
MFM-15  
MFM-20

**Write-On**

Brady  
LEM  
Panduit Corp.  
Thomas & Betts Corp.

PWC-PK  
PPCL-BW  
PSCB  
WM-BW3  
WM-BW5

**Notes:** (1)The catalog number is suffixed with the letter R, B, or W to indicate Red, Blue or White bands.

(2)The catalog number is suffixed with the letter B, G or Y to indicate Blue, Green or Yellow color coded tags.

(3)The catalog number is suffixed with the letter B, G, W or Y to indicate Blue, Green, White or Yellow color coded tags.

3.3  
1-03  
gs

qs - Bonding Connector Harnesses

Manufacturer

Catalog Number

qs-a - #6 AWG Stranded Harness Wires

Bonding in Aerial, Buried or Underground Splice Cases,  
and Ready-Access Enclosures

	<u>Noninsulated</u>			<u>Insulated</u>		
	<u>10" Length</u>	<u>20" Length</u>	<u>22" Length</u>	<u>10" Length</u>	<u>20" Length</u>	<u>22" Length</u>
Electric Motion Company	EM8100-10B.10	EM8100-20B.10	EM8100-22B.10	EM8100-10.10	EM8100-20.10	EM8100-22.10
LSW	LSW 6-10	LSW 6-20	LSW 6-22	LSW 6-10C	LSW 6-20C	LSW 6-22C

Bonding in Buried Plant Housings

	<u>Noninsulated</u>			<u>Insulated</u>		
	<u>6" Length</u>	<u>11" Length</u>	<u>18" Length</u>	<u>6" Length</u>	<u>11" Length</u>	<u>18" Length</u>
Electric Motion Company	EM8100-6B.10	EM8100.11B.10	EM8100-18B.10	EM8100-6.10	EM8100.11.10	EM8100-18.10
LSW	LSW 6-06	LSW 6-11	LSW 6-18	LSW 6-06C	LSW 6-11C	LSW 6-18C

qs-b - #6 AWG Braid

Bonding in Aerial, Buried, or Underground Splice Cases,  
Ready-Access Enclosures, and Buried Plant Housings

	<u>Noninsulated</u>	<u>Insulated</u>
A.K. Stamping	A1163	-
Electric Motion Company	EM-2050	EM-2051
Excelco	579203-25	-
3M	25T (4)	25/4467 (4)

See page 3.3.1 for notes.

**gs - Bonding Connector Harnesses**  
**(Stranded Type Wire)**

**Buried Service Wire (Bare Metal Shields Only)**

**Manufacturer**

**Catalog Number**

**gs-a - #14 AWG Insulated Harness Wires**

**Bonding at Station Protector (Network Interface Device)**

	<b><u>7" Length</u></b>
Corning Cable Systems	GH-13 <sup>(1)</sup>
Electric Motion Company	EM1407TFFR <sup>(1)</sup>
Engineered Products Co.	EH-13 <sup>(1)</sup>
LSW	LSW-5 <sup>(1)</sup>
Preformed Line Products	8000739 <sup>(2)</sup>

**gs-b - #6 AWG Insulated Harness Wires**

**Bonding in Buried Plant Housings**

	<b><u>15" Length</u></b>	<b><u>36" Length</u></b>
Electric Motion Company	EM3955-6L/8100-15 <sup>(3)</sup>	EM3955-6L/8100-36 <sup>(3)</sup>

- Notes:**
- (1)** Harnesses equipped with AMP's #329860 Termi-Foil<sup>R</sup> connector at one end for attachment to the bare metal shield of the service wire.
  - (2)** Harnesses equipped with Preformed Line Products' 8000733 connector at one end for attachment to the bare metal shield of the service wire.
  - (3)** Harnesses equipped with Electric Motion's EM3955 connector at one end for attachment to the bare metal shield of the service wire.
  - (4)** When ordering, state 3-inch eyelets.

3.3.2  
1-03  
gt

**gt - #6 AWG Shield Connector Isolation Harnesses<sup>(1)(2)</sup>**  
(Strand Type Wire)

**Buried Service Wire (Bare Metal Shields Only)**

**Manufacturer**

**Catalog Number**

**Buried Plant Housings Only**

**15" Length**

**36" Length**

Electric Motion Co.

EM 3955-6S/8100-15 BARP<sup>(3)</sup>

EM 3955-6S/8100-36 BARP<sup>(3)</sup>

**Notes:**

<sup>(1)</sup>Restricted for use only where location of buried service wire shields is required at dairy or hog farm facilities to help alleviate stray voltage effects.

<sup>(2)</sup>When these harness wires are used, a warning tag shall be placed on the buried service wire to alert the technician that a voltage difference may be present and that temporary bond strap shall be applied between the service wire shield and connector plate of the buried plant housing before performing any work in the buried plant housing. The temporary bond shall be removed after work is completed in the buried plant housing.

<sup>(3)</sup>Harnesses are equipped with Electric Motion's EM 3955-BARP shield isolation connector at one end for attachment to the bare metal shield of the service wire.

**sv - Filled Plastic Sleeves**

**Manufacturer**

Jameson (W. G. Pearson)

**Catalog Number**

Order by size and description

**Note:** Splicing connectors and plastic sleeves are to be used only on conductor sizes and types and splicing arrangements as recommended by the connector and sleeve manufacturers.

**sm - Buried Plant Warning Signs, Stakes and Decal Markings**

**Manufacturer**

**Catalog Number**

**sm-a Decal Type Warning Signs and Markings<sup>(1)(2)</sup>**

**Non-Reflective**

	<b><u>Warning Signs</u></b>	<b><u>Numerals &amp; Letters</u></b>	<b><u>Symbols</u></b>
3M Company	X	X	-
ACP International	X	X	-
Michael J. Arnold & Co. <sup>(11)</sup>	X	X	X
W. H. Brady	X	X	-
Color Arts, Inc.	X	X	-
Marconi Communications	X	X	-
May Advertising Corp.	X	X	-
Tech Products	X	X	X
Vernon Company	X	-	-
Vulcan Signs	X	X	-

**sm-b Decal Type Warning Signs and Markings<sup>(1)(2)</sup>**

**Reflective**

	<b><u>Warning Signs</u></b>	<b><u>Numerals &amp; Letters</u></b>	<b><u>Symbols</u></b>
3M Company	-	No. 5000 <sup>(5)</sup> No. 5005 <sup>(6)</sup> No. 5025 <sup>(6)</sup>	No. 5002
ACP International	CBC36RY CBC36RO	CBC36RY CBC36RO	-
Michael J. Arnold & Co. <sup>(11)</sup>	MJADWR	MJAD__ <sup>(12)</sup> R	MJADSR
W. H. Brady	-	5905 Series	-
William Frick & Co.	CAUT-BC/IND	REF1.5 <sup>(5)(16)</sup> OREF1.5 <sup>(6)(16)</sup> REF3T <sup>(5)</sup> OREF3T <sup>(6)</sup>	
Vulcan Signs	UCM Series	UEC Series	-

See page 3.5.3 for notes.

**sm - Buried Plant Warning Signs, Stakes and Decal Markings**

<b><u>Manufacturer</u></b>	<b><u>Catalog Number</u></b>		
	<b><u>sm-c Signs and Stakes</u></b>		
	<b><u>Cable Splice</u></b>	<b><u>Cable Route</u></b>	<b><u>Warning</u></b>
ACP International <sup>(3)</sup>	-	-	ACP-BM-53
Michael J. Arnold & Co. <sup>(3)(4)</sup>	MJABCSA -	MJA930615 <sup>(13)</sup> -	MJACBC MJA__ <sup>(14)</sup>
W. H. Brady	B-11 <sup>(3)</sup> - -	B-13 <sup>(3)</sup> - -	B-12 <sup>(3)</sup> BL1 BL2
Carsonite	-	-	Impactor
Decal Industries <sup>(4)</sup>	-	-	FP__ <sup>(7)</sup> _ <sup>(8)</sup> D__ <sup>(9)</sup>
William Frick & Co. <sup>(3)(4)</sup>	BC-SPLICE	CABLE-RT	BC-CAUTION
GreenLine <sup>(4)</sup>	-	-	FLU1RD96016
Lyle Signs Inc. <sup>(3)(4)</sup>	UT-55	UT-54	UT-53
Maloney Technical Products <sup>(6)</sup>	-	-	MRKR™
Marconi Communications <sup>(3)</sup>	1SP41233	1SP41232	1SP4121
May Advertising Corp. <sup>(3)(4)</sup>	BM55-MABCS 412	BM54-MACR 412	BM53-MABC 412
J. Miller Industries, Inc. <sup>(6)</sup>	-	-	JMI-375-096-OR-100
Quantum	-	-	QM-375
Repnet	REA/PSA-1	REA/PSA-2	REA/PSA-3
Rustproof Signs, Inc. <sup>(3)</sup>	R-709 -	R-710 -	R-708 R-666
SArgent-SOwell <sup>(3)</sup>	49PHV067	49PHV069	49PHV068
Vulcan Signs <sup>(3)(4)</sup>	UCM-102	UCM-101	UCM-505

See page 3.5.3 for notes.

**3.5.2**  
**1-03**  
**sm**

**sm - Buried Plant Warning Signs, Stakes and Decal Markings**

**Manufacturer**

**Catalog Number**

**sm-c Signs and Stakes**

**Mounting Stakes**

Michael J. Arnold & Co.	UPC-8__ (15)
W. H. Brady	96920
Carsonite	CUM-375
Decal Industries	FP__ (7)-__ (9)
William Frick & Co.	POST-8FT(17)
FlexStake	302 303 304 305
GreenLine	FLU1-96
Marconi Communications	UP4120__ (10)
J. Miller Industries, Inc.	JMI-375-096-OR
Rustproof Signs, Inc.	RP-208N
Vulcan Signs	82GR

See page 3.5.3 for notes.



- Notes:**
- (1) All decals should be applied using manufacturers recommended materials and practices.
  - (2) Order by size and description.
  - (3) Stake not included.
  - (4) Signs may be ordered with black lettering on orange background.
  - (5) Available only in black lettering on yellow background.
  - (6) Available only in black lettering on orange background.
  - (7) Blank denotes color of marker. Replace blank with W for White, O for Orange, or G for Green.
  - (8) Blank denotes number and color of decals. Replace blank with 1Y for 1 yellow decal, 2Y for 2 yellow decals, 1O for 1 orange decal, or 2O for 2 orange decals.
  - (9) Blank denotes length of marker in inches. Replace blank with 60, 66, 72, or 78.
  - (10) Blank denotes length of stake in inches. Replace blank with either 72 or 96.
  - (11) Decals may be ordered with black lettering on orange background.
  - (12) Replace blank with "N" for numerals and "L" for letters.
  - (13) Add letter "A" to catalog number to obtain sign with arrows. The six-digit number is the manufactured date and identifies the purchaser.
  - (14) Replace blank with "TF" for tri-fold and "QF" for quad-fold.
  - (15) Replace blank with "G" for green painted and "GAL" for galvanized.
  - (16) When ordering specify either 1 decal or 4 decals per sheet.
  - (17) When ordering specify either 2 pound or 1.12 pound post.

	<b>Item Designation</b>	<b>Page</b>
Arresters, gas tube.....	nh.....	5.4
"    secondary power .....	gi.....	5.5
Blocks, terminal, for use in pedestals .....	sh.....	5.6
Building entrance terminal (BET) – Protected .....	ni.....	5.1
Network interface devices.....	nid.....	5.7
Protectors, mainframe.....	nm.....	5.2
"    power service.....	gg.....	5.3

**ni – Building Entrance Terminal (BET) - Protected<sup>(1)(2)</sup>**

**ni-a Fuseless, Well Mount, Carbon**

<b><u>Manufacturer</u></b>	<b><u>Pair Count</u></b>	
	<b><u>25-Pair</u></b>	<b><u>50-Pair</u></b>
Marconi Communications	2BT25PMH/1304S 25P4X4MH/1304S <sup>(2)</sup>	2BT50PMH/1304S 50P4X4MH/1304S <sup>(2)</sup>

**ni-b Fuseless, Module, Carbon**

<b><u>Manufacturer</u></b>	<b><u>Pair Count</u></b>		
	<b><u>25-Pair</u></b>	<b><u>50-Pair</u></b>	<b><u>100-Pair</u></b>
3M <sup>(3)</sup>	4188-25 <sup>(4)</sup> /3AB 4 <u>(5)</u> 88 <u>(6)</u> -25/3AB 4990 <u>(7)</u> -25/3AB	4188-50 <sup>(4)</sup> /3AB 4 <u>(5)</u> 88 <u>(6)</u> -50/3AB 4990 <u>(7)</u> -50/3AB	4188-100 <sup>(4)</sup> /3AB 4 <u>(5)</u> 88 <u>(6)</u> -100/3AB 4990 <u>(7)</u> -100/3AB
Marconi Communications	--	--	R134C/3AB

**Notes:**

- (1) Designations after the slash “/” mark indicate the arrester unit which RUS has accepted for use in the listed protected building entrance terminal (BET). Unless otherwise noted, no other arrester unit is RUS accepted for use in protected building entrance terminals listed here.
- (2) Restricted to inside mounting.
- (3) The arrester module accepted for these protected building entrance terminals is the 3AB carbon arrester module manufactured by Marconi Communications.
- (4) Must be supplied with 4188C-25, 50, or 100 protector covers, as appropriate to protected building entrance terminal size provided.
- (5) Blank space replaced with 2, 4, 5, 6, or 7.
- (6) Blank space replaced with F or R.
- (7) Blank space or blank space replaced with 2, 3, 4, 5, or 6.

ni – Building Entrance Terminal (BET) - Protected<sup>(1)</sup> (7)

ni-c Fuseless, Well Mount, Gas Tube

Manufacturer

Pair Count

25-Pair

50-Pair

Marconi Communications

2BT25VSRMH/1304VSR2(2)(5)  
25VSR4X4MH/1304VSR2(2)(5)(7)

2BT50VSRMH/1304VSR2(2)(5)  
50VSR4X4MH/1304VSR2(2)(5)(7)

ni-d Fuseless, Module, Gas Tube

Manufacturer

Pair Count

12-Pair

25-Pair

50-Pair

100-Pair

AT&T Network  
Systems

--

189-25/3B1ER(2)(5)

189-50/3B1ER(2)(5)

189-100/3B1ER(2)(5)

Corning Cable  
Systems

--

C-552/7X(2)(5)

C-550/7X(2)(5)

C-551/7X(2)(5)

3M(10)

--

4188-25(11)/6U2VS(2)(5)

4188-50(11)/6U2VS(2)(5)

4188-100(11)/6U2VS(2)(5)

--

4188-25(11)/3GUVS(3)(4)

4188-50(11)/3GUVS(3)(4)

4188-100(11)/3GUVS(3)(4)

--

4\_(8)88\_(9)-25/6U2VS(2)(5)

4\_(8)88\_(9)-50/6U2VS(2)(5)

4\_(8)88\_(9)-100/6U2VS(2)(5)

--

4\_(8)88\_(9)-25/3GUVS(3)(4)

4\_(8)88\_(9)-50/3GUVS(3)(4)

4\_(8)88\_(9)-100/3GUVS(3)(4)

--

4\_(12)88\_(13)-25/6U2VS(2)(5)

4\_(12)88\_(13)-50/6U2VS(2)(5)

4\_(12)88\_(13)-100/6U2VS(2)(5)

--

4\_(12)88\_(13)-25/3GUVS(3)(4)

4\_(12)88\_(13)-50/3GUVS(3)(4)

4\_(12)88\_(13)-100/3GUVS(3)(4)

Marconi  
Communications

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R134C/6U2VS(2)(5)

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--

--

R134C/3GUVS(3)(4)

--

BEP\_(14)25\_(15)/\_(19)

BEP\_(14)50\_(15)/\_(19)

BEP\_(14)100\_(15)/\_(19)

--

BEPB25\_(17)/\_(19)

BEPB50\_(17)/\_(19)

BEPB100\_(17)/\_(19)

--

BEP\_(18)25SC\_(16)/\_(19)

BEP\_(18)50SC\_(16)/\_(19)

BEP\_(18)100SC\_(16)/\_(19)

See page 5.1.3 for notes.

**ni – Building Entrance Terminal (BET) - Protected<sup>(1) (7)</sup>**

**ni-d Fuseless, Module, Gas Tube (Cont'd)**

<b><u>Manufacturer</u></b>	<b><u>Pair Count</u></b>			
	<b><u>12-Pair</u></b>	<b><u>25-Pair</u></b>	<b><u>50-Pair</u></b>	<b><u>100-Pair</u></b>
Surge Technologies	ST260 66-12/ST3B1E <sup>(3)(5)</sup>	ST260 66-25/ST3B1E <sup>(3)(5)</sup>	ST188 ENA1-50/ST3B1E <sup>(3)(5)</sup>	ST188 B1-100/ST3B1E <sup>(3)(5)</sup>
	--	ST260 110-25/ST3B1E <sup>(3)(5)</sup>	ST188 110-50/ST3B1E <sup>(3)(5)</sup>	ST188 ENA1-100/ST3B1E <sup>(3)(5)</sup>
	--	--	ST189 B1-50/ST3B1E <sup>(3)(5)</sup>	ST188 110-100/ST3B1E <sup>(3)(5)</sup>
	--	--	ST190 A1-50/ST3B1E <sup>(3)(5)</sup>	ST189 B1-100/ST3B1E <sup>(3)(5)</sup>
	--	--	ST250 66-50/ST3B1E <sup>(3)(5)</sup>	ST190 A1-100/ST3B1E <sup>(3)(5)</sup>
	--	--	--	ST250 66-100/ST3B1E <sup>(3)(5)</sup>
TII	--	515 25/355M <sup>(3)(6)</sup>	--	--
	--	516 25/356M1 <sup>(3)(5)</sup>	--	--

See page 5.1.3 for notes.

**Notes:** (1) Designations after the slash "/" mark indicate the arrester unit which RUS has accepted for use in the listed protected building entrance terminal (BET). Unless otherwise noted, no other arrester unit is RUS accepted for use in protected building entrance terminals listed here.

(2) 2-electrode.

(3) 3-electrode.

(4) Medium duty.

(5) Heavy duty.

(6) Maximum duty.

(7) Restricted to inside mounting.

(8) Blank space replaced with 2, 4, 5, or 6.

(9) Blank space replaced with F or R.

(10) The arrester modules accepted for these 3M protected building entrance terminals are manufactured by Marconi Communications.

(11) Must be supplied with 4188C-25, 50, or 100 protector covers, as appropriate to protected building entrance terminal size provided.

(12) Blank space replaced with 8 or 9. Also accepted for outdoor mounting.

(13) Blank space or blank space replaced with B.

(14) Replace the blank space with C, G, or CG.

(15) Replace the blank space with C, MM, CF, or FS.

(16) Replace the blank space with 6, 12, or 25 feet.

(17) Replace the blank space with MM, CF, or FS.

(18) Replace the blank space with C or CG.

(19) Replace the blank space with 3GUVS<sup>(3)(4)</sup> or 6U2VS<sup>(2)(5)</sup>.

5.2  
1-03  
nm

nm - Mainframe Protectors<sup>(1)(7)</sup>

Manufacturer

	<u>Carbon</u>		
	<u>10-Pair</u>	<u>50-Pair</u>	<u>100-Pair</u>
Marconi Communications	713/3AB	--	R399/3AB
Porta Systems	--	--	508PF/35BCN
	<u>Gas Tube</u>		
	<u>10-Pair</u>	<u>50-Pair</u>	<u>100-Pair</u>
AT&T Network Systems	--	--	310/3B1ER <sup>(2)(5)</sup>
Corning Cable Systems	--	--	C-388/7A <sup>(2)(5)</sup>
Marconi Communications	R713/6A20 <sup>(2)(5)</sup> R713/3G <sup>(3)(4)</sup>	--	R399/6A20 <sup>(2)(5)</sup> R399/3G <sup>(3)(4)</sup>
Porta Systems	--	--	508PF/65BCN <sup>(2)(5)</sup>
	<u>Solid-State</u> <sup>(8)</sup>		
	<u>100-Pair</u>		
Circa Telecom	2500QC2-100/CT3B1FS 2500QC2-100/CT3B1S		
Corning Cable Systems	<sup>(9)</sup> /11A		
Marconi Communications	R399/S3AB		

- Notes:**
- (1) Not to be used at subscribers' premises.
  - (2) 2-electrode.
  - (3) 3-electrode.
  - (4) Medium duty.
  - (5) Heavy duty.
  - (6) Maximum duty.
  - (7) Designations after the slash "/" mark indicates the arrester unit which RUS has accepted for use in the listed protector. Unless otherwise noted, no other arrester unit is RUS accepted for use in protectors listed here.
  - (8) PEG-7, Class I Category.
  - (9) For use with Corning's C-388 mainframe protector.

**gg - Power Service Protectors**

<b><u>Manufacturer</u></b>		<b><u>Catalog Number</u></b>
	Maximum Service Voltage:	125/250
Atlantic Scientific	ZoneGuardian Plus	#42003
	" "	#43005
	" "	#43006
	ZoneGuardian Series	#35029
	" "	#35030
	" "	#35031
Corning Cable Systems		CP 211
EFI Corporation		DPI 153
		DPI 453 Turbo ST
		EFI 153
		EFI 453 Turbo ST
Northern Technologies		PLS-II
		2000344
		2000345
		2000347
TII		410BM
		411BM
		412BM
		422BM
Transtector		ACP100BL
		CPS 150
Tripp Lite		ISOBLOK 2-0
		ISOBAR 2-6
		" 4-6
		" 8-15

**nh – Arrester Units<sup>(1)</sup>**

**nh-a Gas Tubes**

<b><u>Manufacturer</u></b>	<b><u>MDF Module</u></b>	<b><u>Station Module</u></b>	<b><u>Well Mount</u></b>
Bourns	-	125-EW-R <sup>(2)(5)</sup>	-
Corning Cable Systems	7A <sup>(2)(5)</sup>	7X <sup>(2)(5)</sup>	-
	-	PTD <sup>(3)(5)</sup>	-
	-	PTD <sup>(3)(6)</sup>	-
Marconi Communications	6A20 <sup>(2)(5)</sup>	6U2VS <sup>(2)(5)</sup>	1304VSR <sup>(2)(5)</sup>
	3G <sup>(3)(4)</sup>	3GUVS <sup>(3)(4)</sup>	-
	-	G1200-0-350 <sup>(2)(5)</sup>	-
Porta Systems	-	65BCN <sup>(2)(5)</sup>	-
Surge Technologies	ST3B1E <sup>(3)(5)</sup>	ST356-350V <sup>(3)(5)</sup>	-
TII	-	126M <sup>(2)(5)</sup>	-
	-	355M <sup>(3)(6)</sup>	-
	-	356M1 <sup>(3)(5)</sup>	-
	-	AD-02W-FS <sup>(3)(5)</sup>	-
Tyco	-	GSSP <sup>(3)(5)</sup>	-

**nh-b Solid-State**

<b><u>Manufacturer</u></b>	<b><u>MDF Module</u></b>	<b><u>Station Module</u></b>
Circa Telecom	CT3B1FS <sup>(7)(11)</sup>	-
	CT3B1S <sup>(7)(11)</sup>	-
Corning Cable Systems	11A <sup>(7)(9)</sup>	PTD <sup>(7)(10)</sup>
Surge Technologies	ST3B1E-BAL <sup>(8)</sup>	-

See page 5.4.1 for notes.

**5.4.1**  
**1-04**  
**nh**

**Notes:**

<sup>(1)</sup>Arresters listed under this category are not complete protected building entrance terminals (BET) mainframe protectors, or network interface devices (NID). They are intended for use as components, as accepted and listed, in the protected BETs, mainframe protectors, and network interface device "ni", "nm", and "nid" sections of the List of Materials. Arrester units here shall not be used in a BET, mainframe protector or network interface device listed in the "ni", "nm", or "nid" sections unless the same arrester unit is listed for use in the particular BET, mainframe protector, or network interface device on the "ni", "nm", or "nid" pages.

<sup>(2)</sup>2-electrode.

<sup>(3)</sup>3-electrode.

<sup>(4)</sup>Medium duty.

<sup>(5)</sup>Heavy duty.

<sup>(6)</sup>Maximum duty.

<sup>(7)</sup>PEG-7, Class I Category.

<sup>(8)</sup>PEG-7, Class II Category.

<sup>(9)</sup>For use with Corning's C-388.

<sup>(10)</sup>For use with Corning's NI-2000 Series NID unit.

<sup>(11)</sup>For use with Circa Telecom's 2500QC2-100.

**gi - Secondary Power Arresters**

<b><u>Manufacturer</u></b>	<b><u>Catalog Number</u></b>	
	Main Service Voltage:	125/250
	<b><u>Signal and Power</u></b>	<b><u>Power Only</u></b>
ACT Communications <sup>(5)</sup>	-	452-120-XOX 452-240-XOX 453-120-XOX 453-240-XOX 453-277-XOX 453-480-XOX 454-120-XOX 454-240-XOX 455-120-XOX 455-240-XOX 455-277-XOX 455-480-XOX 472-120-XOX 472-240-XOX 473-120-XOX 473-277-XOX
Advanced Protection Technologies	-	TE/100      TE/1000 TE/200      TE/2000 TE/300      TE/3000 TE/600      TE/6000
Approved Lightning Protection Co.	-	SA-20
Atlantic Scientific	ZoneSentinel Series "      " "      " "      " ZoneMaster 75 Series "      " "      " "      " ZoneMaster 140 Series "      " "      " "      "	#12100 #12101 #12102 #12103 #11200 #11201 #11202 #11203 #17100 #17101 #17102 #17103
EFI Corporation	-	MBP120EFI-Y_ <sup>(4)</sup>
General Electric	-	9L15DCB002

See page 5.5.2 for notes.

5.5.1  
1-04  
gi

gi - Secondary Power Arresters

<u>Manufacturer</u>	<u>Catalog Number</u>	
	Main Service Voltage: 125/250 (Cont'd)	
	<u>Signal and Power</u>	<u>Power Only</u>
Joslyn	-	1250-__ <sup>(7)</sup> 1260-__ <sup>(8)</sup> 1261-__ <sup>(8)</sup> 1265-__ <sup>(9)</sup> 1266-__ <sup>(10)</sup> 1450-85 1452-__ <sup>(11)</sup> 1455-__ <sup>(12)</sup>
Northern Technologies, Inc.	-	MMK-BX <sup>(6)</sup> -OA <sup>(1)</sup> A DMK-BX <sup>(6)</sup> -__ <sup>(2)</sup> <sup>(1)</sup> A
	<b>Other Service Voltages</b>	
	<u>Signal and Power</u>	<u>Power Only</u>
AC Data Systems	-	Surge Blox
Advanced Protection Technologies	-	TE/400      TE/4000 TE/500      TE/5000
Atlantic Scientific	ZoneSentinel Series "      " "      " ZoneMaster 75 Series "      " "      " ZoneMaster 140 Series "      " "      "	#12104 #12105 #12106 #11204 #11205 #11206 #17104 #17105 #17106
Joslyn	-	1250-32-E 1263-21 1451-85 1456-__ <sup>(13)</sup>
Northern Technologies, Inc.	-	MMK-__ <sup>(3)</sup> X <sup>(6)</sup> -OA <sup>(1)</sup> A DMK-__ <sup>(3)</sup> X <sup>(6)</sup> -__ <sup>(2)</sup> <sup>(1)</sup> A
Tesco	-	TES 1120Y
Transtector	-	ACP3000 CPS Series APEX Series MCP Series SLIM LINE 120V SLIM LINE 240V

See page 5.5.2 for notes.

**Notes:**

- <sup>(1)</sup>Blank space replaced with S, A, B, or C.
- <sup>(2)</sup>Blank space replaced with 10 or 20.
- <sup>(3)</sup>Blank space replaced with C,D, E, G, H, or J.
- <sup>(4)</sup>Blank space replaced with 1, 2, or 3.
- <sup>(5)</sup>(X) denotes manufacturer's catalog number for optional lamps, alarming, and enclosures.
- <sup>(6)</sup>X may be replaced by an E for external enclosure or an I for internal enclosure type.
- <sup>(7)</sup>Blank space replaced with 32, 33, or 33-E.
- <sup>(8)</sup>Blank space replaced with 21, 41, 45, or 85.
- <sup>(9)</sup>Blank space replaced with 21, 41, 45, 85, 85-PM, or 85-PMT.
- <sup>(10)</sup>Blank space replaced with 45 or 85.
- <sup>(11)</sup>Blank space replaced with 21, 41, 80, 85, or 85-PM.
- <sup>(12)</sup>Blank space replaced with 21, 41, 45, 80, 85, or 85-PM.
- <sup>(13)</sup>Blank space replaced with 41, 45, 80, 85, or 85-PM.

**sh - Terminal Blocks for Use in Pedestals**

**Manufacturer**

**Catalog Number**

**sh-a Unprotected Filled IDC Terminal Blocks**

	<b>1-Pair (w/leads)</b>	<b>2-Pair (w/leads)</b>	<b>5-Pair (w/leads)</b>	<b>6-Pair (w/leads)</b>	<b>10-Pair (w/leads)</b>	<b>12-Pair (w/leads)</b>	<b>15-Pair (w/leads)</b>	<b>25-Pair (w/leads)</b>	<b>50-Pair (w/leads)</b>
3M Company <sup>(10)</sup>	--	--	1D5XXXXXXXXX	--	ID10XXXXXXXXXX	--	ID15XXXXXXXXXX	ID25XXXXXXXXXX	--
Channell	--	--	--	MRB/CMR06 Series	MRT/CMR10 Series	--	--	MRT2/CMR25 Series	--
Marconi Communications	--	-- RGIS2SLS <sup>(4)</sup>	RPI5A <sup>(5)</sup> RGIS5A <sup>(6)</sup>	RPI6A <sup>(5)(8)</sup> RGIS6A <sup>(6)</sup>	RPI10A <sup>(5)(8)</sup> RGIS10A <sup>(6)(8)</sup>	RPI12A <sup>(5)(8)</sup> RGIS12A <sup>(6)(8)</sup>	--	RPI25A <sup>(5)(8)</sup> RGIS25A <sup>(6)(8)</sup> RTIS25A <sup>(7)(8)</sup>	--
Thomas&Betts	--	--	54866 <sup>(1,5,8,9)</sup> 2520 <sup>(1,5,8)</sup> 5460002 <sup>(2)</sup>	54867 <sup>(1,5,8,9)</sup> 2521 <sup>(1,5,8)</sup> 5460102 <sup>(2)</sup>	54868 <sup>(1,5,8,9)</sup> 2522 <sup>(1,5,8)</sup> 5460202 <sup>(2)</sup>	54869 <sup>(1,5,8,9)</sup> 2523 <sup>(1,5,8)</sup> 5460302 <sup>(2)</sup>	54070 <sup>(1,5,8,9)</sup> 2524 <sup>(1,5,8)</sup> 5460502 <sup>(2)</sup>	54071 <sup>(1,5,8,9)</sup> 2525 <sup>(1,5,8)</sup> --	-- 2526 <sup>(1,5,8)</sup> --
Tyco Electronics (D Terminator 2)	--	--	PTB-5-AU-4 --	-- --	PTB-10-AU-4 PTB-10-FS <sup>(3)</sup>	PTB-12-AU-4 PTB-12-FS <sup>(3)</sup>	-- --	PTB-25-AU-4 PTB-25-FS <sup>(3)</sup>	-- --

**sh-b Unprotected Filled Binding Post Terminal Blocks**

	<b>1-Pair (w/leads)</b>	<b>2-Pair (w/leads)</b>	<b>5-Pair (w/leads)</b>	<b>6-Pair (w/leads)</b>	<b>10-Pair (w/leads)</b>	<b>12-Pair (w/leads)</b>	<b>15-Pair (w/leads)</b>	<b>25-Pair (w/leads)</b>	<b>50-Pair (w/leads)</b>
Marconi Communications	--	--	RPT5A4G <sup>(1)</sup> RGT5A4G <sup>(2)</sup>	-- --	RPT10A4G <sup>(1)</sup> RGT10A4G <sup>(2)</sup>	-- --	-- --	RPT25A4G <sup>(1)</sup> RGT25A4G <sup>(2)</sup>	-- --

- Notes:**
- (1)E/W bottom exit pigtail stub.
  - (2)E/W rear exit pigtail stub.
  - (3)Stub cables accepted in 12 feet and 25 feet lengths using RUS accepted PE-39 or PE-89 cables. Order stub cable in accordance with manufacturer's instructions.
  - (4)Can only be ordered stubless from the manufacturer.
  - (5)E/W bottom exit pigtail stub available in 4, 12, or 25 foot lengths. Order pigtail stub in accordance with manufacturer's instructions.
  - (6)E/W rear exit pigtail stub available in 4, 12, or 25 foot lengths. Order pigtail stub in accordance with manufacturer's instructions.
  - (7)E/W top exit pigtail stub available in 4, 12, or 25 foot lengths. Order pigtail stub in accordance with manufacturer's instructions.
  - (8)Can be ordered with a filled cable stub using RUS accepted PE-39 or PE-89 cables in 4, 12, or 25 foot lengths. Order stub cable in accordance with manufacturer's instructions.
  - (9)Flat plane block for left and right side drop wire entrance.
  - (10) Contact vendor for pedestal and aerial stub options.

**nid – Network Interface Devices<sup>(1)</sup>**

**nid-a Gas Tube Protection**

<b><u>Manufacturer</u></b>	<b><u>Catalog Designation</u></b>
Alcoa (c/o Petro Comm)	SNI 4600/355M <sup>(3)(6)</sup> , 356M1 <sup>(3)(5)</sup> , or 125-EW-R <sup>(2)(5)</sup>
Corning Cable Systems	NI-2000 Series/PTD <sup>(3)(5)</sup> or PTD <sup>(3)(6)</sup>
TII	3600/355M <sup>(3)(6)</sup> , 356M1 <sup>(3)(5)</sup> , 126M <sup>(2)(5)</sup> , or AD-02W-FS <sup>(3)(5)</sup> 3700/355M <sup>(3)(6)</sup> , 356M1 <sup>(3)(5)</sup> , 126M <sup>(2)(5)</sup> , or AD-02W-FS <sup>(3)(5)</sup> 6300/355M <sup>(3)(6)</sup> , 356M1 <sup>(3)(5)</sup> , 126M <sup>(2)(5)</sup> , or AD-02W-FS <sup>(3)(5)</sup>
Tyco	RAYNID 760 Series/GSSP <sup>(3)(5)</sup> RAYNID 2900 Series/GSSP <sup>(3)(5)</sup>

**nid-b Solid-State Protection<sup>(7)</sup>**

<b><u>Manufacturer</u></b>	<b><u>Catalog Designation</u></b>
Corning Cable Systems	NI-2000 Series/PTD <sup>(8)</sup>

**Notes:**

<sup>(1)</sup>Designations after the slash "/" mark indicate the arrester unit or units, which RUS has accepted for use in the listed network interface device. Unless otherwise noted, no other arrester unit or units is RUS accepted for use in network interface devices listed here.

<sup>(2)</sup>2-electrode.

<sup>(3)</sup>3-electrode.

<sup>(4)</sup>Medium duty.

<sup>(5)</sup>Heavy duty.

<sup>(6)</sup>Maximum duty.

<sup>(7)</sup>Recommended only for customer access installations of 12 pairs and greater. In addition, all pairs shall be terminated in the network interface device whether or not the pairs are in service.

<sup>(8)</sup>PEG-7, Class I Category.

	<b>Item Designation</b>	<b>Page</b>
Access equipment.....	ae.....	6.1
Switching equipment, digital, stored program.....	pc.....	6.3
Transport equipment.....	te.....	6.2
Wireless networks.....	wn.....	6.4

**ae - Access Equipment**

<b><u>Manufacturer</u></b>	<b><u>Product</u></b>	<b><u>Copper</u></b>	<b><u>Fiber</u></b>	<b><u>Wireless</u></b>
Actelis Networks	MetaLIGHT 1500	Y	N	N
	MetaLIGHT 100E	Y	N	N
ADC	PG-FlexPlus <sup>(11)</sup>	Y	N	N
ADTRAN	Access Equipment <sup>(7)</sup>	Y	Y	Y
AFC	UMC 1000A	Y	Y	Y
	DMAX 1120	Y	Y	Y
Alcatel	Litespan-2000	Y	Y	N
Allied Telesyn	Multiservice Access Platform <sup>(15)</sup>	Y	N	N
Calix	Calix C7	Y	Y	N
Charles Industries	Dualine Plus <sup>(1)</sup>	Y	N	N
	HVDL 3.1	Y	N	N
Ciena	CN1000	Y	Y	N
Conklin	C8000+4 MSSL	Y	N	N
	FASTmux ADSL Mini-DSLAM	Y	N	N
	Model 2000	Y	N	N
Fujitsu	FLASHWAVE 4010	N	Y	N
	FLASHWAVE 4100	N	Y	N
General Bandwidth	G6 Access & Media Gateway	Y	Y	N
GoDigital	XCel-4a	Y	N	N
	XCel-8	Y	N	N
	XCel-12	Y	N	N
Lucent Technologies (AG Communications)	AnyMedia	Y	N	N
	SLC Series 5 <sup>(3)</sup>	Y	N	N
	SLC-2000 Access System	Y	Y	N
	SuperLine Access	Y	N	Y
Marconi	DISC*S	Y	N	N
Net To Net Technologies	IP DSLAM 4000 <sup>(8)</sup>	Y	N	N
	IP DSLAM 12000 <sup>(8)</sup>	Y	N	N
	ADSL MiniDSLAM	Y	N	N
	T1 Network Extender 1500	Y	N	N
Next Level Communications	Unified Access Platform	Y	Y	N

See page 6.1.2 for notes.

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ae

ae - Access Equipment

<u>Manufacturer</u>	<u>Product</u>	<u>Copper</u>	<u>Fiber</u>	<u>Wireless</u>
Occam	BLC-1100	Y	Y	N
	BLC-1200 System	Y	Y	N
Optical Solutions	FiberPath <sup>(12)</sup>	N	Y	N
Paradyne	GranDSLam 4200 DSLAM <sup>(5)</sup>	Y	N	N
Pulsecom	S-24DU <sup>(4)</sup>	Y	Y	Y
	PSC Series 5 <sup>(2)</sup>	Y	Y	N
Quantum Bridge Communications	QB3000 OAS	N	Y	N
	QB5000 OAS	N	Y	N
	QB100 IOT	N	Y	N
	QB622 IOT	N	Y	N
Siemens Information and Communication Networks	Accession Integrated Access Platform	Y	Y	N
Sorrento Networks	JumpStart	N	Y	N
Telco Systems	EdgeGate VOIP Multi-Service Gateway <sup>(13)</sup>	N	Y	N
Telstrat International	Inteleflex	Y	Y	N
Wave7 Optics	Last Mile Link <sup>(10)</sup>	N	Y	N
World Wide Packets	LightningEdge Access Solution <sup>(14)</sup>	Y	Y	N
Zhone Technologies	AccessNode <sup>(6)</sup>	Y	Y	N
	MALC <sup>(9)</sup>	Y	Y	N
	ISC-303	Y	Y	N

See page 6.1.2 for notes.

**Notes:**

- (1) Includes the DDL125, DDL135, DDL201, DDL205, DDL210, DDL221, and DDL237 only.
- (2) Includes the RT 596, RT5 192, RT 384, RT 576, and PSC Series 5 Fiber Kit.
- (3) Includes the SLC-2000 Multi-Services Distant Terminal and DDM-2000 FiberReach Narrowband Shelf.
- (4) Includes the S-24DU HUB.
- (5) The GranDSLam 4200 DSLAM includes the ReachDSL DSLAM and the ADSL DSLAM.
- (6) Includes the AccessNode Express and UE9000.
- (7) Includes the Total Access (TA) 750, TA 850, TA 1000, TA 1200 DSLAM, TA 1500, TA 3000, TA 3050, and TA 4303, MX2800, MX2810, MX2820, TA OPTI-3, TA OPTI-MX, and TRACER.
- (8) Includes Multiplexer Uplink Module, ADSL Access Multiplexer Module, SDSL Inverse Multiplexer Module, and T1 Access Multiplexer 1500.
- (9) Due to a lack of sufficient field experience, the ADSL+POTS+splitter card is not included in the MALC listing.
- (10) The Last Mile Link (LML) includes Last Mile Core (LMC), Last Mile Tap (LMT), Last Mile Mux (LMM), and Last Mile Gateway (LMG).
- (11) The PG-FlexPlus includes the COT, RT, Field Shelf, Edge RAM and Edge IAD.
- (12) This listing includes the FiberPath 400 and FiberPath 500.
- (13) This listing includes Models GW-282 (indoor version) and GW-282S (outdoor version).
- (14) The LightningEdge Solution listing is limited to the following products: LE-22, LE-22H, LE-32, LE-36, LE-36H, LE-38, LE-410, LE-410 (DC) and LE-317.
- (15) This acceptance includes the 7400 and 7700 units.

**te - Transport Equipment**

<b><u>Manufacturer</u></b>	<b><u>Product</u></b>	<b><u>Interface Rate</u></b>	<b><u>RF Band</u></b>
ADC	QFLC DS3/OC1 FLC	6.312 Mb/s OC-1	
Advanced Fibre Communications	Telliant 5000 <sup>(5)</sup>	OC-3	
Alcatel	1603 SMX	OC-3/12/48	
Charles Industries	T1		
Ciena	MultiWave CoreStream MetroDirector K2 ONLINE Metro Transport Platform <sup>(7)</sup> DN Multiservice Switching Platform <sup>(11)</sup> ONLINE Edge Multiservice CWDM Platform	OC-12/48/192 OC-3/12/48/192 OC-3/12/48/192 OC-3/12/48 OC-3/12/48	
Cisco Systems	Cisco 15454	OC-3/12/48/192	
Copper Mountain Networks, Inc.	VantEdge 3000 <sup>(10)</sup>	OC-3	
DragonWave, Inc.	AirPair 50 & 100 Wireless Ethernet Bridges		18 & 23 GHz
Fujitsu	FLASHWAVE® 4300	OC-3/12/48	
Lucent Technologies	DDM-2000 Metropolis DMX WaveStar TDM 2.5G/10G	OC-3/12 OC-3/12/48 OC-3/12/48/192	
Luminous Networks	PacketWave <sup>(12)</sup>	OC-3/12/48	
LuxN, Inc.	GigaMux (GM) 1600 <sup>(8)</sup> GigaMux (GM) 3200 <sup>(9)</sup>	OC-3/12/48 OC-3/12/48	
Marconi	MAS ASX 200 BX ASX 1000 ASX 1200	OC-3/12 OC-3/12 OC-3/12 OC-3/12/48	
Movaz Networks, Inc.	RAYexpress RAYextender	OC-3/12/48/192 OC-3/12/48/192	
Nortel Networks, Inc.	OC-3 Express <sup>(1)</sup> OPTera 3500 OPTera Metro 5000 <sup>(6)</sup>	OC-3 OC-3/12/48/192 OC-3/12/48/192	

See page 6.2.1 for notes.

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**te - Transport Equipment**

<b><u>Manufacturer</u></b>	<b><u>Product</u></b>	<b><u>Interface Rate</u></b>	<b><u>RF Band</u></b>
Redback	SmartEdge 800 Intelligent Terminal	OC-3/12/48	
Siemens Information and Communication Networks	XpressPass <sup>(2)</sup>	OC-3/12/48	
Sorrento Networks	GM 6400	OC-3/12/48/192	
Turin Networks	Traverse <sup>(4)</sup>	OC-3/12/48/192	
White Rock Networks	VLX2020 SONET Multiplexer <sup>(3)</sup>	OC-3/12/48/192	
Xtera Communications, Inc.	CityStream 5000	OC-3/12/48	
Zhone Technologies	VISTA	OC-3/12	

**Notes:**

(1) Includes the CX (Compact Express).

(2) Includes the 140, 140HD, 142 and 144.

(3) The VLX2020 listing includes the VLX2020 Main Shelf, and the following tributary shelves:  
DS3/EC1, ETS2, OTS2, and VLX1010 WDM.

(4) Includes Traverse 600, 1600 and 2000.

(5) The Telliant 5000 can provide xDSL lines.

(6) This listing includes Models 5100 and 5200.

(7) This listing includes Models 7000, 9000 and 11000.

(8) The LuxN GigaMux (GM) 1600 series includes the GM 1602 and GM 1608 DWDM/CWDM products.

(9) The LuxN GigaMux (GM) 3200 series includes the GM 3217 and GM 3234 DWDM/CWDM products.

(10) The VantEdge 3000 can provide T-1 circuits and xDSL lines.

(11) This listing includes Models 7000, 7050, 7100, and 7200.

(12) This listing includes PacketWave M, C, and E Series (E200, E510 and E520).

**pc - Stored Program Digital Switching Equipment**

<b><u>Manufacturer</u></b>	<b><u>Base</u></b>	<b><u>Accepted System Release</u></b> <sup>(5)</sup>	<b><u>Acceptance Classification</u></b> <sup>(1)</sup>	<b><u>RST(s)</u></b>
AG Communications Systems	GTD-5EAX	1732	A	RSU
CopperCom	CSX 1100 <sup>(9)</sup>	2.1	A	CSX 1100
Lucent Technologies	5ESS-2000 <sup>(6)</sup>	5E16.2	A	EAIU BZ-RS/EAIU RSM ORM TRM
MetaSwitch	VP3500 <sup>(9)</sup>	2.3	A	VP3500
Nortel Networks, Inc.	DMS-10 <sup>(2)</sup>	504.10	A	RLCM (OPAC) RSC-S Star Remote Hub
	DMS-100 <sup>(3)</sup>	LEC00017	A	RLCM (OPAC) RSC-S RSC Star Remote Hub
Redcom Lab., Inc.	MDX	17.0	A	MDX-R
	MDX-I <sup>(7)</sup>	6.0	A	MDX-IR
Santera Systems, Inc.	SanteraOne <sup>(9)</sup>	2.0	A	SanteraOne
Siemens Information and Communication Networks	DCO <sup>(4)</sup>	24.0 O-N-E UP	A	RLS-450 RLS-1080 RLS-4000
	EWSD <sup>(8)</sup>	20.0	A	RCU RCU-160C RCU-800C Smart Remote
Tekelec	iX7000	2.3.0	A	iX7000

See page 6.3.1 for notes.

**6.3.1**  
**10-03**  
**pc**

**Notes:**

- (1)Acceptance Classification: C-Conditionally Accepted, A-Accepted.
- (2)The DMS-10 listing includes the one and two bay version and its application as an HSO, SSO or LCC.
- (3)The DMS-100 listing includes its application as a DMS-200 tandem office and the smaller version of the SuperNode configuration, the DMS-SuperNode SE.
- (4)DCO listing includes the DCO-SE one and two bay configurations and DCO RNS.
- (5)The listed software/firmware system release is the most recent system release that was reviewed by RUS and found to be fully compliant with all requirements of 7 CFR 1755.522, RUS General Specification for Digital, Stored Program Controlled Central Office Equipment (Form 522). Other system releases may also be acceptable. For information on specific releases, please contact the Chairman, Technical Standards Committee "A" (Telecommunications), Rural Utilities Service, Stop 1598, 1400 Independence Avenue, SW., Washington, D.C. 20250-1598.
- (6)The 5ESS-2000 digital exchange listing includes the compact digital exchange 5ESS-2000 (CDX) and the very compact digital exchange 5ESS-2000 (VCDX) in host and remote switching terminal configurations (DRM). The listing also includes the EAIU/BZ-RS Unit, also called the 5E-XC Remote Line Unit. When a VCDX is upgraded to a CDX or full sized 5ESS-2000, it can host the listed RSTs. Unless it is upgraded it can only host the EAIU. Emergency call processing using the BZ-RS is only offered for EAIU Units that are hosted from a full sized 5ESS-2000 or from a DRM. The BZ-RS cannot be used to provide emergency call processing on EAIU Units hosted from a CDX or from a VCDX. System Release 5E16.2 is designated 5E-XC Service Rich Software by Lucent.
- (7)The MDX-I listing is for a minimum system configuration of four shelves, each containing no more than 100 lines or 25 percent of the total equipped lines, whichever is less.
- (8)The EWSD listing includes the EWSD Small Exchange (EWSD-SX) and the Line Trunk Group-O (LTGO).
- (9)Systems used for line access for this switch must be included in the RUS *List of Materials Acceptable for Use on Telecommunications Systems of RUS Borrowers* in category ae – Access Equipment.

**wn – Wireless Networks**

<b><u>Manufacturer</u></b>	<b><u>Product</u></b>	<b><u>Technology</u></b>
AirNet	GSM BSS <sup>(1)</sup>	GSM
interWAVE	GSM Network <sup>(2)</sup>	GSM

Notes:

<sup>(1)</sup>Includes AdaptaCell BTS 3000, AirSite BS, BSC 3000, TRAU, and AirNet OMC-R.

<sup>(2)</sup>Includes WAVEXchange MSC, WAVETransit, WAVEXpress BSC and BTS, and NIB.

	<u>Item Designation</u>	<u>Page</u>
Anchor rods.....	x.....	7.1
Anchors, guy - expanding and plate .....	Z.....	7.2
"    " - drive-type .....	Z.....	7.2
"    " - swamp and rock .....	Z.....	7.2.1
Bolts, angle, thimble-eye.....	ba.....	7.13
" machine.....	c.....	7.13
" straight, thimble-eye.....	ao.....	7.13
Clamps, cable suspension .....	mz.....	7.15
" drop wire.....	mk.....	7.3
" ground rod and pipe (indoors).....	aj.....	7.4
" ground rod and pipe (outdoors).....	aj.....	7.4.1
" guy.....	u.....	7.14
Connectors, grounding.....	me.....	7.5
Guards, buried service.....	am.....	7.6
" cable, plastic.....	wg.....	7.8
"    " split metal.....	sl.....	7.7
" riser.....	sg.....	7.8
Guy hooks .....	br.....	7.15
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Numbers, pole.....	az.....	7.9
Nuts, regular, square .....	px.....	7.16
Rods, anchor.....	x.....	7.1
" ground .....	ai.....	7.10
Screws, lag.....	j.....	7.14
Strand, suspension and guy .....	y.....	7.11
Straps, reinforcement, suspension clamp.....	nb.....	7.16
Thimble-eye nuts.....	ab.....	7.14
Washers .....	d.....	7.14
Wires, cable lashing.....	nw.....	7.12
Miscellaneous items removed from the list.....		7.17

The manufacturers listed below have shown compliance with RUS requirements for the following anchor rods. Some manufacturers cannot supply all sizes listed. Check with manufacturer or distributor for availability.

**x - Anchor Rods**

<b><u>Types</u></b>	<b><u>Diameters</u></b>	<b><u>Lengths</u></b>
Single Guy	1/2"	7 ft.
Single and Double Guys	5/8"	7 & 8 ft.
Single and Double Guys	3/4"	8, 9, & 10 ft.
Single and Double Guys	1"	8, 9, & 10 ft.

**Manufacturers**

Eritech, Inc.  
(Carolina Galvanizing Corp.)  
A. B. Chance Company  
Joslyn Manufacturing and Supply Company  
Kortick Manufacturing Company  
McGraw-Edison  
Utilities Service Company

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z

z - Anchors, Guy<sup>(1)</sup>

<u>Manufacturer</u>		<u>Catalog Number</u>		
		<u>Expanding and Plate Anchors</u>		
<b>Holding Power - Lbs.:</b>		<b>6000</b>	<b>10,000</b>	<b>16,000</b>
<b>Min. Required Area, Proj. Sq. In.:</b>		<b>90</b>	<b>120</b>	<b>200</b>
<b>Rod Diameter, Inches:</b>		<b>5/8</b>	<b>3/4</b>	<b>1</b>
<b>Rod Length, Feet:</b>		<b>7</b>	<b>8</b>	<b>10</b>
A. B. Chance	8 Way	-	88135G	1082G
Grip-Tite	8 Way	A322086-G	A322812-G	A322102-G
Joslyn	8 Way Plate	J8115G -	J8135G J7503G	J8200-1G -
McGraw-Edison	4 Way 6 Way Plate	DA1E5 - DA1P7	DA1E7 - DA1P9	- DA6E3 DA2P2
South Central	8 Way 4 Way	84115AG -	84135AG -	- 1042001G
			<u>Drive-Type</u>	
<b>Holding Power - Lbs.:</b>		<b>6,000</b>	<b>10,000</b>	<b>16,000</b>
<b>Rod Diameter - Inches:</b>		<b>5/8</b>	<b>3/4</b>	<b>1</b>
Foresight Products		MR-3	MR-2	MR-I MR-SR <sup>(2)</sup>

**Notes:** (1)Where galvanized anchors are listed, the same anchors ungalvanized (black asphalt coated) are also acceptable.

(2)Swamp anchor.

**z - Anchors, Guy**

<b><u>Manufacturer</u></b>	<b><u>Catalog Number<sup>(1)</sup></u></b>			
	<b><u>Swamp Anchors</u></b>			
	<b><u>10" dia.</u></b>	<b><u>12" dia.</u></b>	<b><u>15" dia.</u></b>	
A. B. Chance	10150AS	132AS	152AS	
Foresight Products	-	MR-SR <sup>(2)</sup>	-	
Joslyn	J2871SG	J2872SG	J2873SG	
	<b><u>Rock Anchors</u></b>			
	<b><u>Expanding Type</u></b>			<b><u>Split Wedge Type</u></b>
<b>Anchor Size - Inches:</b>	<b><u>1-3/4</u></b>	<b><u>1-3/4</u></b>	<b><u>1-3/4</u></b>	<b>-</b>
<b>Rod Length - Inches:</b>	<b><u>15</u></b>	<b><u>30</u></b>	<b><u>53</u></b>	<b><u>18</u></b>
<b>Rod Diameter - Inches:</b>	<b><u>3/4</u></b>	<b><u>3/4</u></b>	<b><u>3/4</u></b>	<b><u>1</u></b>
A. B. Chance	R315	R330	R353	-
Joslyn	J3436	J3437	J3438	-
Kortick	K5503	K5504	K5505	K2377
Utilities Service	CR315	CR330	CR353	-

**Notes:** <sup>(1)</sup>Where galvanized anchors are listed, the same anchors ungalvanized (black asphalt coated) are also acceptable.

<sup>(2)</sup>Drive type swamp anchor (see drive anchor category).

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1-03  
mk

mk - Drop Wire Clamps

<u>Manufacturer</u>	<u>Catalog Number</u>
Diamond Communications	23-44441 23-88881*
General Machine Products	7380-B
Reliable	2PRS*

\*Suitable for use in corrosive areas.

**aj - Ground Rod and Pipe Clamps**

**Station Installations (Indoors Only)**

<b><u>Manufacturer</u></b>	<b><u>Catalog Number</u></b>		
<b>This conductor:</b>	<b>.162" (#6 AWG) Copper</b>	<b>.102" (#10 AWG) Copper</b>	<b>.081" (#12 AWG) Copper</b>
<b>Connected to:</b>	<b><u>Pipe Ground (Copper or Steel) 5/8"-1-1/4" O.D.</u></b>	<b><u>Pipe Ground (Copper or Steel) 5/8"-1-1/4" O.D.</u></b>	<b><u>Pipe Ground (Copper or Steel) 5/8"-1-1/4" O.D.</u></b>
Electric Motion	EM5507 EM5517(3)	EM5507 EM5517(3)	EM5507 EM5517(3)
Reliable	13(1) --	13(1) 1(1)(2)	13(1) 1(1)(2)

- Notes:** (1)Smallest size pipe this clamp can be used on is 3/4".  
 (2)Can only be used on copper pipe.  
 (3)Can accommodate one #6 to #14 AWG and one #10 to #14 AWG copper conductor.

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aj

**aj - Ground Rod and Pipe Clamps**

**Station Installations (Outdoors)**

**Manufacturer**

**Catalog Number**

**.081" (#12 AWG), .102" (#10 AWG) and .162" (#6 AWG) Copper**

<b>Connected to:</b>	<b><u>Ground Rod (Galvanized Steel)</u></b>		<b><u>Ground Rod (Copper-Covered Steel)</u></b>	
	<b><u>1/2"</u></b>	<b><u>5/8"</u></b>	<b><u>1/2"</u></b>	<b><u>5/8"</u></b>
Blackburn <sup>(1)</sup>	G4P	G5P	G4	G5
H. L. Boggs	CR-1, M2009 <sup>(1)</sup>	CR-1, M2012 <sup>(4)</sup>	CR-1, 2009 <sup>(1)</sup>	CR-1, M2012 <sup>(4)</sup>
Burndy	GRC12 <sup>(1)</sup>	--	GRC12 <sup>(1)</sup>	--
Connector Castings <sup>(1)</sup>	--	--	G-4	G-5
Electric Motion	EM5507 EM5517 <sup>(3)</sup> EM1DB EM4DB <sup>(1)(8)</sup>	EM5507 EM5517 <sup>(3)</sup> EM2DB EM4DB <sup>(1)(8)</sup>	EM5507 EM5517 <sup>(3)</sup> EM1DB EM4DB <sup>(1)(8)</sup>	EM5507 EM5517 <sup>(3)</sup> EM2DB EM4DB <sup>(1)(8)</sup>
Erico (Cadweld)	GR1-141G <sup>(1)(2)</sup> GR1-141A <sup>(1)(2)</sup>	GR1-161G <sup>(1)(2)</sup> GR1-161A <sup>(1)(2)</sup>	GR1-141G <sup>(1)(2)</sup> GR1-141A <sup>(1)(2)</sup>	GR1-161G <sup>(1)(2)</sup> GR1-161A <sup>(1)(2)</sup> EHL58C1G <sup>(4)</sup>
Eritech, Inc. (Knight Metalcraft)	--	--	CP 12	CP 58
Galvan	G4P <sup>(1)</sup>	G5P <sup>(1)</sup>	G4 <sup>(1)</sup>	G5 <sup>(1)</sup>
Joslyn	--	--	J8491	J8492 <sup>(4)</sup>
Penn-Union	CEB-1-TN <sup>(4)</sup>	CEB-2-TN <sup>(4)</sup>	CEB-1 <sup>(4)</sup>	CEB-2 <sup>(4)</sup>
Thomas & Betts	--	--	--	DGC58-66 <sup>(4)</sup>
Tyco Electronics	1-83017-1 <sup>(5)</sup> 83017-5 <sup>(4)</sup> --	1-83017-3 <sup>(5)</sup> 83017-2 <sup>(4)</sup> --	1-81713-1 <sup>(5)</sup> 81713-5 <sup>(4)</sup> -- 81405-1	1-81713-3 <sup>(6)</sup> 1-81713-2 <sup>(7)</sup> 81713-1 <sup>(4)</sup> 81406-1

**Notes:**

- (1) Accepted only for use with 0.102" (#10 AWG) and 0.162" (#6 AWG) wire.
- (2) Includes disposable mold.
- (3) Can accommodate one #6 to #14 AWG and one #10 to #14 AWG copper conductor.
- (4) Accepted only for use with .162" (#6 AWG) wire.
- (5) Accepted only for use with 0.102" (#10 AWG) or 0.081" (#12 AWG) wire.
- (6) Accepted only for use with 0.102" (#10 AWG) wire.
- (7) Accepted only for use with 0.081" (#12 AWG) wire.
- (8) Can be used on a ground that is already occupied by another ground rod clamp on top.

me - Grounding Connectors

<u>Manufacturer</u>	<u>Catalog Number</u>		
	<u>.162" (#6 AWG) Copper</u>	<u>.102" (#10 AWG) Copper</u> <u>.162" (# 6 AWG) Copper</u>	<u>.102" (#10 AWG) Copper</u>
<u>Connected to:</u>	<u>.162" (#6 AWG) Copper</u>	<u>.257" (#4 AWG)</u> <u>ACSR</u>	<u>.102" (#10 AWG) Copper</u>
Anderson Electric	C-6	--	C-10
Blackburn	6H	--	--
Burndy	KS17	--	KS90
Dossert	DS2F	--	DS09F
Erico <sup>(1)</sup>	PGT-1G1G (Solid-to-Solid) PGT-1H1H (Stranded-to-Stranded) PGT-1H1G (Solid-to-Stranded)	-- --	PGT-1B1A (Stranded-to-Solid) PGT-1A1A (Solid-to-Solid)
Electric Motion	EM 2371	--	EM 2371
Fargo	GC-5006	--	GC-5008
Galvan	K-6	--	--
Joslyn	J3606	--	J3657F
Kearney	118102	--	118100
Penn-Union	S-6	SW-5	S-10
Tyco Electronics	81663-1 <sup>(2)</sup>	--	--

<sup>(1)</sup>Additional Erico CADWELD connectors are available for other combinations of ground wire.

<sup>(2)</sup>For use with two stranded #6 conductors only.

7.5.1  
1-03  
me

**me - Grounding Connectors**

**(Compression Type)**

**Manufacturer**

**Catalog Number**

**.102" (#10 AWG) Copper  
to  
.109" (#12 BWG) (MPDW)**

Burndy

YC8C8-ET

National Tel.

T2-109D

**#6 Copper to  
#4 & #6 Alum.**

**#6 Copper to  
#2 & #4 Alum.**

Blackburn

6CA

4CA

Burndy

KSA4

KSA2

Penn-Union

SW-5

SW-6

**me - Grounding Connectors**

<b><u>Manufacturer</u></b>	<b><u>Catalog Number</u></b>		
<b>Connected to:</b>	<b><u>.102" (#10 AWG) Copper</u></b>	<b><u>.109" (#12 BWG) Steel (MPDW)</u></b>	<b><u>#10 AWG Copper</u></b> <b><u>.134" Steel (MPDW)</u></b>
Blackburn	9TW		-
Burndy	KSL-15		-
Dossert	DSN1F		-
Penn-Union	SW-1		SW-2

**.102" (#10 AWG) Copper**

<b>Connected to galvanized steel strand:</b>	<b><u>6M</u></b>	<b><u>10M</u></b>	<b><u>16M</u></b>
Aberdeen	AB 438	AB 438	AB 438
Blackburn	1HPS	1OHPS	20HPS
Burndy	-	KSU25	KSU26
Dossert	DSNS6F	DSNS10F	DSNS13F
Electric Motion	EM GC8010P EM GC8020P	EM GC8010P EM GC8020P	EM GC8010P EM GC8020P
Fargo	GC8010P	GC8020P	GC8020P
Joslyn	J-3030	J-3030	J-3030
Penn-Union	SW-6	SW-7	SW-8

**.102" (#10 AWG) Copper**

<b>Connected to:</b>	<b><u>Aluminum-Clad Steel Strand</u></b>		
	<b><u>6M</u></b>	<b><u>10M</u></b>	<b><u>16M</u></b>
Electric Motion	EM GC8010P EM GC8020P	EM GC8010P EM GC8020P	EM GC8010P EM GC8020P
Fargo	GA-620C	GA-620C	GA-620C
Penn-Union	PCA-010-H	PCA-010-H	PCA-010-H

**For Buried Plant Housings (PE-91)**

**#6 AWG**

Electric Motion	EM 0164(1) EM 2371T
Fargo	GC-164SHP(1) GC-5006SHP

(1) Connector will accept braid.

**am - Buried Service House Riser Guards**

<b><u>Manufacturer</u></b>	<b><u>Catalog Number</u></b>								
<b>Type:</b>	<b><u>Conduit</u></b>	<b><u>Conduit</u></b>	<b><u>Conduit</u></b>	<b><u>Conduit</u></b>	<b><u>Conduit</u></b>	<b><u>Conduit</u></b>	<b><u>Conduit</u></b>	<b><u>Conduit</u></b>	<b><u>Closed "U"</u></b>
<b>Standard Length and Size:</b>	<b><u>5' x 3/8"</u></b>	<b><u>5' x 1/2"</u></b>	<b><u>5' x 5/8"</u></b>	<b><u>5' x 7/8"</u></b>	<b><u>5' x .9"</u></b>	<b><u>5' x 1.13"</u></b>	<b><u>5' x 1.25"</u></b>	<b><u>20' x 1"</u></b>	<b><u>5' x 5/8"</u></b>
Charles Industries, Ltd.	--	--	12-119R	--	--	--	--	--	--
HMS Inc.	--	R-061	R-070	--	R-080	--	R-125	--	--
OSI Plastics Division of Ohio Steel Industries, Inc.	--	--	--	723181 723181 723198	--	723609 723567	--	--	--
Virginia Plastics	VP-38-5*	--	--	--	--	--	--	VP-1-EC	VP-B58*

\*Staples will be required for mounting conduit. Double headed nails will be required for mounting Closed "U" type moulding. The mounting hardware shall be ordered separately from this manufacturer.

sl - Split Metal Cable Guards

Manufacturer

Catalog Number

10-Foot Straight Section

1" I.D.

3" I.D.

5-Foot Straight Section

1" I.D.

3" I.D.

5-Foot Curved Section

1" I.D.

3" I.D.

2-1/2-Foot Straight Section

1" I.D.

3" I.D.

2-1/2-Foot Curved Section

1" I.D.

3" I.D.

7.8  
1-03  
sg;wg

**sg - Riser Guards (Pole)<sup>(1)</sup>**

<b>Inside diameter, inches:</b>	<b><u>1</u></b>	<b><u>2</u></b>	<b><u>3</u></b>
<b><u>Manufacturer</u></b>	<b><u>Catalog Number</u></b>		
Carlton Products	-	59011	59013
A. B. Chance	6531-1/2	6533	6535
Custom Plastics <sup>(2)</sup>	CPU1	CPU2	CPU3
Electrical Materials Co.	51-2	52-2	53-2
Fargo	UP-843G*	UP-844G*	UP-845G*
Inwesco	54B01	54B03	54B04
Joslyn	J984	J987	J989
McGraw-Edison	DU7P4	DU7P6	DU7P8
Marconi Communications	UP125-8G*	UP225-8G*	UP325-8G*
Nordic Fiberglass	U-101 <sup>(2)</sup>	-	-

\*Numbers shown identify painted guards. Use of riser guard straps with these guards not needed.

<sup>(1)</sup>Order by inside diameter and length.

<sup>(2)</sup>Mounting staples must be purchased separately.

**wg - Plastic Cable Guards**

<b><u>Manufacturer</u></b>	<b><u>Catalog Number</u></b>		
	<b><u>Longitudinally Split</u></b>		
<b>Sizes, inches:</b>	<b><u>1 x 8</u></b>	<b><u>1-1/2 x 8</u></b>	<b><u>2 x 8</u></b>
General Machine Products	7422-1	7422-1-1/2	7422-2

**Spirally Cut**

General Machine Products	Type P (Specify diameter and length)			
Preformed Line	Type PTG	"	"	"
Tyco Electronics	*Spirap	"	"	"

\*Specify black outdoor polyethylene.

az - Numbers, Pole

<u>Manufacturer</u>	<u>Catalog Number</u>			
	<u>Metal</u>			
	<u>1"</u>	<u>1-1/2"</u>	<u>3"</u>	<u>6"</u>
Almetek <sup>(1)</sup>	X	-	X	X
Premax <sup>(1)</sup>	-	X	-	-
<u>Plastic</u>				
3M Company	No. 5012 (Use 3M decals from 3M-b)			

**Note:** (1) Order by size and description.

7.10  
1-03  
ai

**ai - Ground Rods**  
(without pigtails)

<u>Manufacturer</u>	<u>Catalog Number</u>			
	<u>1/2" x 5'</u>	<u>5/8" x 8'</u>	<u>5/8" x 10' Sectional</u>	<u>Sectional Coupling</u>
Apache	G125* GR125-R**	G588* GR588-R**	GRS5810-R	GRC58
Blackburn	- -	GR6258* 625813MX**	- 6260S13MX**	- 60C
A. B. Chance	8565*	8578*	8512*	8611*
Eritech, Inc. (Carolina Galvanizing/ Knight Metalcraft)	811350* 611353**	815880* 615883**	835800* 635803**	GSC-58* CR58**
Galvan	GR5005* 5005G13	GR6258* 6258G13**	- 6260G13S**	60-C** 60-TC** GRC-58G* GRC-54G*
Joslyn	J5315*	J5328*	J23282.10* J9160-13**	J23282-A* J9182**
Kortick	-	K4658-F*	-	-
McGraw-Edison	-	DN5S8*	DN13S110*	DN1K2*
Utilities Service	-	5307*	-	-
Wilcor	-	WA8580G*	-	-

\*Galvanized Steel

\*\*Copper-Covered Steel

**y - Suspension and Guy Strand**

These manufacturers' strands shown by X's comply with  
RUS 7 CFR Part 1755.370

**Manufacturer**

**Catalog Number**

**Utilities grade, steel, seven wire**

(For use as suspension or for guys)

	<b><u>5/16"(6M)</u></b>	<b><u>3/8"(10M)</u></b>	<b><u>7/16"(16M)</u></b>	<b><u>Class</u></b>
Bekaert Corporation	X	X	X	A,B,C
Cal-Wire Stranding	X	X	X	A,B,C
CF&I Steel Corporation	X	X	X	A
Davis Walker Corporation	X	X	X	A
Florida Wire and Cable	X	X	X	A,B,C
Indiana Steel & Wire	X	X	X	A,B,C
National Strand Products	X	X	X	A,B,C
Seal Wire	X	X	X	A

**Extra High Strength Grade, steel, seven wire**

(For use as suspension or for guys)

	<b><u>1/4"(6M)</u></b>	<b><u>5/16"(10M)</u></b>	<b><u>7/16"(16M)</u></b>	<b><u>Class</u></b>
Aceros Camesa	X	X	X	A,B,C
Bekaert Corporation	X	X	X	A,B,C
Cal-Wire Stranding	X	X	X	A,B,C
CF&I Steel Corporation	X	X	X	A
Davis Walker Corporation	X	X	-	A
Florida Wire and Cable	X	X	X	A,B,C
Indiana Steel & Wire	X	X	X	A,B,C
National Strand Products	X	X	X	A,B,C
Paulsen Wire Rope Corp.	X	-	-	A
Seal Wire	X	-	-	A
Wire Rope Corporation of America (WRCA)	X	X	X	A

7.12  
1-03  
nw

nw - Cable Lashing Wires

<u>Manufacturer</u>	<u>Catalog Number</u>					
	<u>Aluminum-Clad Steel</u>			<u>Type 430 Stainless Steel</u>		<u>Aluminum*</u>
<b>Diameter, Inches:</b>	<b>.064</b>	<b>.045</b>	<b>.061</b>	<b>.045</b>	<b>.061</b>	<b>.080</b>
<b>Coil Length, Feet:</b>	<b><u>600</u></b>	<b><u>1200</u></b>	<b><u>650</u></b>	<b><u>1200</u></b>	<b><u>650</u></b>	<b><u>375</u></b>
Aberdeen	-	-	-	45AC	61AC	-
Cable Spinning Equipment Company	-	-	-	13A	11A	16A
Central Wire	-	-	-	S4300004500LWA	S4300006100LWA	-
ECS Metals Limited	-	-	-	X	X	-
General Machine Products	-	-	-	7153A	-	-
Greening Donald Co., Ltd.	-	-	-	80608	80363	-
Industrial Alloys, Inc.	-	-	-	072-430-045-S	072-430-061-S	-
Loos & Company	-	-	-	045SA430LP	061SA430LP	-
Maryland Specialty Wire, Inc.	-	-	-	958-45M	958-61M	-
National Standard	-	-	-	03811	18815	-
Senior Industries	-	-	-	SI-9603	SI-9606	-
ZAPP, Inc.	-	-	-	2355	2356	-

\*This type of wire only, is to be used with aluminum-clad steel strand in seacoast areas.

Manufacturer

Catalog Number

c - Bolts, machine

	<u>5/8"</u>	<u>3/4"</u>
Chance	C88XX(1)	C89XX(2)
Joslyn	J88XX(6)	J89XX(7)

ao - Bolts, straight, thimble-eye

	<u>5/8"</u>	<u>3/4"</u>
Chance	C55XX(3)	C56XX(4)
Joslyn	J80XX(8)	J80XX(9)

ba - Bolts, angle, thimble-eye

	<u>5/8"</u>	<u>3/4"</u>
Chance	C50XX(3)	C51XX(5)
Joslyn	J81XX(8)	J81XX(9)

See page 7.13.1 for notes.

**7.13.1**  
**1-03**  
**c;ao;ba**

**Notes:**

- (1)** Order bolts by changing X's in catalog number to length of bolt in inches; accepted for lengths 5", 6", 7", 8", 9", 10", 12", 14", 16", 18", 20", 22", and 24".
- (2)** Order bolts by changing X's in catalog number to length of bolt in inches; accepted for lengths 8", 10", 12", 14", 16", 18", 20", 22", 24", and 26".
- (3)** Order bolts by changing X's in catalog number to length of bolt in inches; accepted for lengths 10", 12", 14", and 16".
- (4)** Order bolts by changing X's in catalog number to length of bolt in inches; accepted for lengths 12" and 14".
- (5)** Order bolts by changing X's in catalog number to length of bolt in inches; accepted for lengths 10", 12", and 14".
- (6)** Order bolts by changing X's in catalog number to length of bolt in inches; accepted for lengths 5", 6", 7", 8", 9", 10", 11", 12", 13", 14", 15", 16", 18", 20", 22", and 24".
- (7)** Order bolts by changing X's in catalog number to length of bolt in inches; accepted for lengths 5", 6", 7", 8", 9", 10", 12", 14", 16", 18", 20", 22", 24", and 26".
- (8)** Order bolts by changing X's in catalog number to length of bolt in inches; accepted for lengths 6", 8", 10", and 12".
- (9)** Order bolts by changing X's in catalog number to length of bolt in inches; accepted for lengths 8", 10", and 12".

**Manufacturer**

**Catalog Number**

**d - Washers**

Type:	<u>Curved</u>			<u>Flat</u>		<u>Square</u>
	<u>2-1/2x2-1/2x3/16</u>	<u>3x3x1/4</u>	<u>3x3x1/4</u>	<u>2-1/4x2-1/4x3/16</u>	<u>2-1/4x2-1/4x3/16</u>	<u>2-1/4x2-1/4</u>
Hole sizes, in.:	<u>11/16</u>	<u>11/16</u>	<u>13/16</u>	<u>13/16</u>	<u>11/16</u>	<u>11/16</u>
Chance	-	6823 1/2	6822 1/2	-	-	6813
Stanley G. Flagg	-	-	P143A	-	-	-
Joslyn	J6822	J113	J6823	J1076	J1075	-

**j - Screws, Lag**

	<u>1/2" x 4"</u>	<u>5/8" x 5"</u>
Chance	C508754	-
Joslyn	J-8754P	J-8765

**u - Guy Clamps**

Strand size, inches:	<u>5/16</u>	<u>7/16</u>
Joslyn	J930	J931

**ab - Thimble-Eye Nuts**

Size, inches:	<u>5/8</u>	<u>3/4</u>	<u>3/8</u>
Chance	6510	-	-
Continental Electric Company	TN-5	TN-6	-
Stanley G. Flagg	P128A	-	P129A
Joslyn	J6510	J6511	-

7.15  
1-03  
bk;br;ek;mz

Manufacturer

Catalog Number

bk - Guy Lift Plates

	<u>For 5/8" Bolts</u>	<u>For 3/4" Bolts</u>
Chance	-	7897
Joslyn	J7896	J7894

br - Guy Hooks

<b>Bolt size (inches):</b>	<u>5/8</u>	<u>3/4</u>
Continental Electric Company	GA-5X	GA-64
Stanley G. Flagg	P135AX	P134AX
Joslyn	J6555	J6556
Power Play Products	B58GH	-

ek - Locknuts

<b>Size:</b>	<u>5/8"</u>	<u>3/4"</u>
Joslyn	J8583	J8584

mz - Cable Suspension Clamps

<b>Type:</b>	<u>Straight</u>	<u>Angle</u>
Chance	C7903	C7902L
Joslyn	J1096	J7902-B

7.16  
1-03  
nb;px

**Manufacturer**

**Catalog Number**

**nb - Suspension Clamp Reinforcement Straps**

<b>Size:</b>	<b><u>1-3/4"</u></b>	<b><u>2"</u></b>
Chance	C7905	-
Joslyn	J7905	J7908

**px - Regular Square Nuts**

<b>Size:</b>	<b><u>5/8"</u></b>	<b><u>3/4"</u></b>
Chance	C55084P	C55085P
Joslyn	J8563	J8564

**7.17**  
**1-03**

The following items have been removed from the List of Materials because of their limited use and not because of their inability to meet applicable requirements. Their removal from the list does not relieve borrowers of their responsibility to use materials that meet RUS requirements, ASTM or other national specifications.

- i - Bolts, carriage
- aa - Oval eye nuts
- al - Ground wire staples and nails
- at - Guy guards
- bl - Steel support brackets
- bm - Guy thimble
- cb - Conductor bundle bags
- df - False deadends
- dm - Permanent cable identification markers
- dz - Guy wire clips
- mf - Drive hooks
- mi - Drop wire support
- mj - Drop wire clip
- mm - Drive rings
- mo - Angle screw
- mx - Steel pole steps
- my - Drop wire hooks
- na - Aerial and underground cable
- nc - Cable extension arms
- nd - Metal pole keys
- ne - Bridle rings
- ns - Span clamps
- pg - Porcelain insulated screweyes
- ph - Screw anchors
- pk - Moisture blocks
- pt - Vinyl tape
- pw - Detachable pole steps
- py - Lashing wire terminal clamps
- st - Spacer tape
- tc - Cable ties
- wf - Self-supporting cable
- za - Filler tape
- ze - Sealing compound

	<b><u>Item Designation</u></b>	<b><u>Page</u></b>
Layer three switch .....	lts .....	8.1
Subscriber management system .....	sms .....	8.2

Its - Layer Three Switch

Manufacturer

Alcatel

Type Designation

Omni Switch/Router

8.2  
1-03  
sms

**sms - Subscriber Management System**

**Manufacturer**

Redback

**Type Designation**

SMS-500 and 1800

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